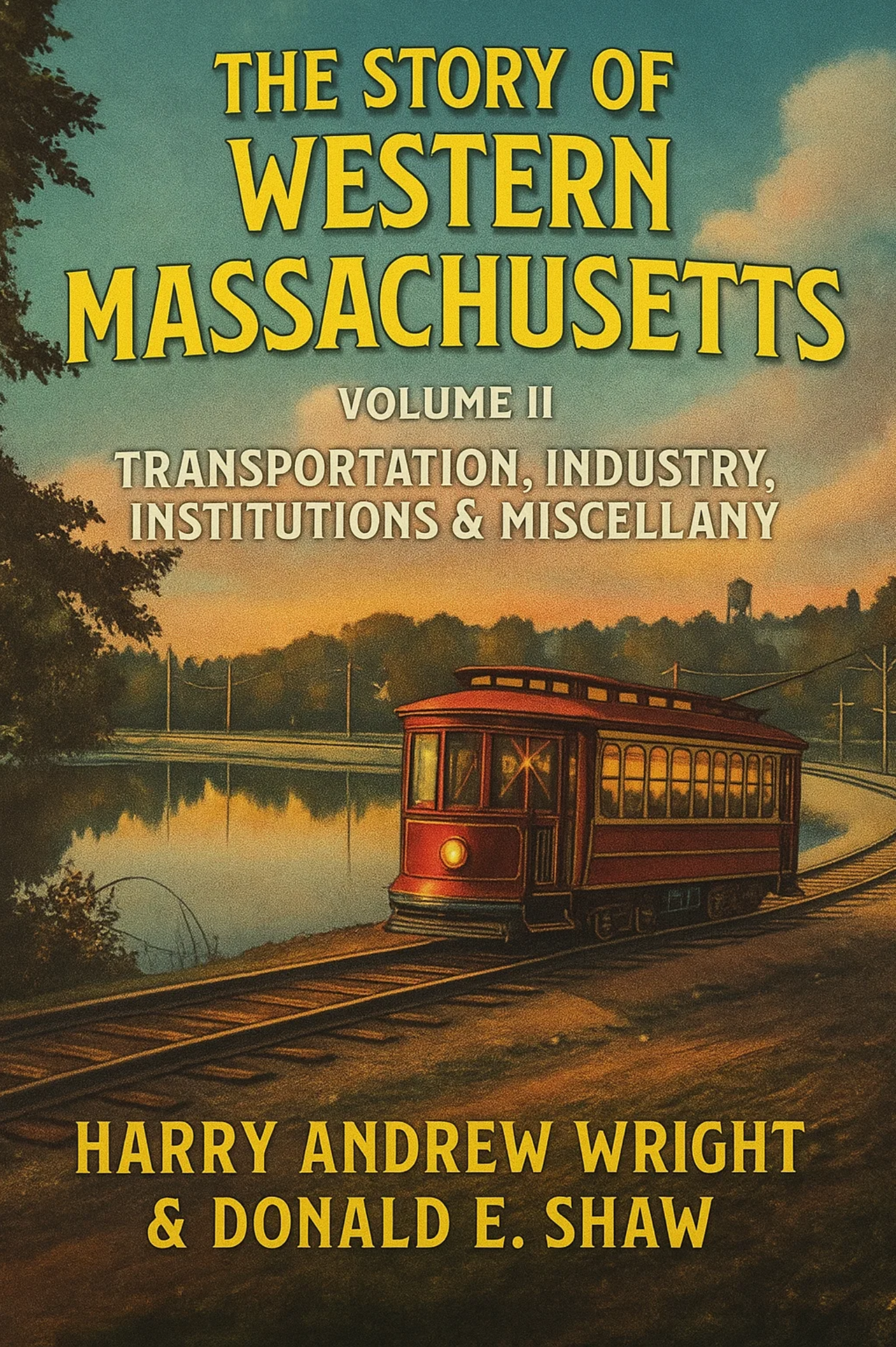
THE STORY OF WESTERN MASSACHUSETTS

VOLUME II

TRANSPORTATION, INDUSTRY, INSTITUTIONS & MISCELLANY



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THE STORY OF

Western Massachusetts

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VOLUME II

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CHAPTER XLI

Transportation and Travel

TRANSPORTATION PROBLEMS

WHEN the erstwhile British Colonies became an entity as the United States of America, many far-seeing individuals were fully aware of some of the handicaps to be overcome before prosperity could be universal. Each of the new states controlled a greater or lesser part of the coastline of the Atlantic and were therefore equipped to carry on free and ready commercial relations with each other. In addition, there were a number of rivers which provided transportation from the interior to the seaboard, but such were most casual and limited to narrow fields.

Shortly before resigning his commission in 1783, Washington had explored the route through the Mohawk Valley, afterward taken, first by the Erie Canal and later by the New York Central Railroad and had prophesied its commercial importance in a later century. In 1785 he became president of a company organized for extending the navigation of the Potomac and James rivers. Such actions eventually brought home to the people, the fact that means for transporting the natural wealth of the interior to a lucrative market, were of vital importance.

The gentlemen of the European counting houses and the captains of industry who came to New England seeking outlets for their capital and their talents, were irked and irritated by the meager means afforded them for getting about the country. Little choice was offered. The more hardy used the saddle horse, with a change of clothing and other absolute necessities carried in saddle-bags. More pretentious baggage could be cared for with a led-horse equipped with a pack saddle. For short distances, the more fastidious traveled in the public stage coach or by private rig with cabriolet or chaise. In some cases, even water craft were used to advantage, but it was all tedious and uncertain. Nevertheless, considering the conditions, there was an amazing amount of travel, the details of which are known owing to the almost universal habit of keeping personal journals and diaries, of which a surprising number were preserved for posterity.

The earliest of these that is readily available is the Latin journal of John Winthrop who journeyed overland from Boston to Saybrook

via Springfield in 1645, returning by way of New London, which has been fully considered in these pages.

Though Winthrop demonstrated that an overland journey from Boston to Springfield was possible, it was many years before such use became common, mainly because of the rough, mountainous country in the vicinity of Sturbridge and Brimfield. In 1648 Governor Winthrop recorded that "this year a new way was found to the Connecticut river by Nashaway which avoided much of the hilly way." This was more or less parallel to the route traversed by Winthrop, but more northerly. The new way was via Quabaug (now Brookfield) and it was soon found that a shorter approach to Quabaug was through Marlboro, thus providing a course midway between Winthrop's path and the Lancaster route. This latter road became the common way, and known as the Bay Path it so continued until the automobile brought the modern trunk road into existence. It was in 1648 that the town of Springfield provided "a horse way over the wet meadow to the Bay Path." Yet, even as late as 1671 it was still quite primitive as is shown in the diary of the Rev. Edward Taylor of Westfield. In the same month of November in which Winthrop made his journey, but twenty-six years later, Mr. Taylor, who had been called to the charge of the church at Westfield, also went from Cambridge to Springfield.

"On Thursday, November 23d, 1671, at night it fell a great snow and on the 26th it snowed a pace. On the 27th I set forward, not without much apprehension of a tedious and hazardous journey, the snow being about mid leg deep, the way unbeaten, or the track filled up again and over rocks and mountains and the journey being about an hundred miles. Mr. Cooke of Cambridge told us it was the desperatest journey that ever Connecticut river men undertook.

"The first night we lodged at Malbury. From thence we went out the day following about half an hour before sunrise for Quabauge, [*i. e.* Brookefield], but about eleven o'clock we lost our way in the snow and woods which hindered us some three or four miles, but finding it again by the marked trees, on we went, but our talk was of lying in the woods all night, for we were then about thirty miles off from our lodging, having seen neither house nor wigwam in our way. But about eight at night we came in health to our lodging, from which the next day we set out for Springfield where we arrived also in health. The next day we led our horses in great danger over the Connecticut river, though altogether against my will, upon the ice, which was about two days in freezing. Though the ice cracked at every step, yet mercy going along with us, we came over safely and well, to the wonder of all that knew it. This being the second day of December we came to Westfield."

With the extermination of the Indians in 1676, more time was available for road work and the Bay Path was considerably improved. In 1689 Judge Samuel Sewall of the Massachusetts courts found no

difficulty whatever between Boston and Springfield, though it still was but a bridle path. Even a century later, coach drivers found it extremely hazardous. Judge Sewell said:

"August 15, 1689. Set out for Springfield; lodged at Marlborow. On August 16th to Quaboag with a guard of twenty men under Cornet Brown. Between Worcester and Quaboag we were greatly wet; wet to the skin. Got thither before dark. A guard of twenty from Springfield met us there and saluted us with their trumpets as we alighted."

At the most, the Bay Path accommodated merely the pedestrian and the horseman. Burdens could be transported only on pack saddles. To relieve this situation, on May 29, 1700, John Pynchon of Springfield and four others asked of the Provincial Government that:

"Inasmuch as the road to Connecticut, especially betwixt Worcester and Brookfield, is very much incumbered with fallen trees, many rocks, swamps and other obstructions impassable to travelers, hazarding life or limb of both man and horse, that there be a suitable allowance granted out of the public treasury to repair and amend said road."

Gradually improvement came about. In 1737 Benjamin Franklin was postmaster at Philadelphia and in 1753 he was appointed Deputy Postmaster General of the American Colonies. As such he laid out the post roads, one of which was the Boston-Springfield road. Along its entire length, a mile apart, stones were set up showing the distance to Boston. Thereafter, it was known as the post-road.

To determine the proper location of these milestones, Franklin (being Franklin) used a perambulator, forerunner of the modern odometer. After ascertaining the circumference of the wheel of a vehicle, a train of gears communicated motion to an index on a dial affixed to the body of the vehicle, thus giving the correct mileage.

Between Palmer and Warren a section of this post road remains today much in its original state. This is parallel to, but on the opposite side of the river from the present paved road between the two towns. East of Palmer, the road forks, one branch turning south, crossing the railroad over a bridge and continuing to Brimfield; the present main highway to that town. At the foot of the slope after crossing the railroad, a country road branches at right angles to the east, crosses a bridge over a stream and ascends a hill, continuing to Warren. Away to the north and far off to south, stone walls and rows of elms border the way. One is amazed at the generous width of the road. Those who recall the roads blocked by fallen trees in the September hurricane of 1938 may sense a reason for these wide spaces. New England saw similar storms in 1635 and again in 1815 with many in between. Along this well-kept gravel road, one may in imagination turn time back many years for the whole scene is much the same as when Washington passed over this very road in

1775 to take command of the army at Cambridge. Here still remain many of the markers noted in 1777 by the Hessians of Burgoyne's army who said that "from this place to Boston, mile stones are set up at the distance of every mile."

An Englishman is instinctively intrigued by pageantry, ceremony and imagery, from a Lord Mayor's Day parade or a court presentation to a poor little Punch and Judy show by the roadside. Just a hundred years ago, Charles Dickens found the sidewalks of New York noticeably quiet because of "no itinerant bands, no wind or stringed instruments, no Punches, fantoccini, dancing dogs, jugglers, conjurers, orchestrinas, or even barrel-organs; not so much as a white mouse in a twirling cage." To an English ear it was a strange quiet.

In early New England, the ceremonies and customs of the homeland were slavishly aped until well after the Revolution. George Bliss (1764-1830) a prominent Springfield lawyer of his time, heard his father deliver a plea, dressed in gown, wig, silk stockings and silver shoe buckles and lived to see his son (1793-1873) address the Court in a business suit. In 1659 Hadley was settled and but a year later, at a cost of £5, the town procured "a set of colors, staff, tassels and top." Though their bodily needs might be ill supplied, these people would not be denied the pomp and show that they claimed as a part of their inheritance. As ranking officer of the County Cavalry troop, John Pynchon bedecked himself with all the trappings of an English officer. The inventory of his estate shows that he supplied himself with a "trooping scarf with gold lace, gloves with silver lace, two knots of silver ribbon, ten yards of silver lace and a silver-hilted rapier." No sombre Puritan was he.

In seventeenth century New England, no one upheld the dignities and forms of the law courts or conformed to its mummery more strongly than did Samuel Sewall. Born in England in 1652, he came to America at the age of nine and graduated from Harvard in 1671. From 1692 to 1718 he was a justice of the Superior Court and then became chief justice. He concurred in the witchcraft condemnations in 1692, but in 1697 made a humble, public acknowledgment of his error.

In the autumn of 1718, Judge Sewall with three associates, "riding the circuit" came to Springfield to preside at the sitting of the County Court. Of his experiences, he said:

Wednesday, September 17, 1718.—"Lieutenant Governor Nathan Gold and the Superior Court justices gave us breakfast. Mr. Woodbridge accompanied us, he going to Windsor, where I visited my old friend and classmate, Mr. Samuel Mather with whom I had refreshing converse. He told me he was born September 5, 1651. Captain White, our pilot, gave us a good fricassee of fowl. Baited (*i. e.*, lunched) at Suffield where the county sheriff met us. This town has a pleasant river (Stony River) running through it, upon which besides many other necessary mills, they have one to turn wooden dishes. Their meeting house stands upon a very beautiful ascent. 'Twas

night before we got to Springfield. My heel was a little wet riding through Agawam river which is the Westfield river. Found Colonel Taylor and a great number at Ingersoll's tavern with whom we joined.

Thursday, 18th.—"Rev. Daniel Brewer prayed at the opening of the Court. Mr. Taylor came to visit me, also Rev. Stephen Williams to whom I gave two silver spoons, one engraven February 29, 1704; the other July 3, 1718, being the days of his captivity and marriage. To show how God sets adversity and prosperity, one over against another. Mr. Taylor went home. Court sits Friday and Saturday.

September 21st.—"Lord's day. Mr. Brewer prayed and preached very well and very audibly. Six councilors in his audience; the Court, Colonel Samuel Partridge and Mr. Attorney. Colonel John Pynchon, junior and Mr. Cooke, counsalary men were there. The text was from Romans 16-16. In the afternoon from Second Corinthians 5-13. Court sits Monday and Tuesday morning. James and Jacob Lowton were acquitted as to their murdering Cogro Negro. William Booth of Suffield, upon sending the jury out again, was found guilty of uttering counterfeit bills of credit.

23rd.—"At taking leave of Mr. Brewer I gave him twenty shillings. He prayed four times at Court. His wife is Mr. Nathaniel Chauncey's daughter. The sheriff escorted us five miles on our way. Dined in the pine woods. Got to Brookfield about sunset.

Wednesday, 24th.—"Dined at Strawberry Hill, Leicester. At Worcester was surprised to meet with Judge Palmer. Got to Marlborough about sunset."

Thus it would appear that a "hung jury" was no novelty in 1718. A little pressure on the part of the Court, seems to have resulted in a verdict.

Judge Sewall's approach to Suffield was by way of Kent Avenue, early known as Mill Lane. Just before entering the town, the road crossed Stony Brook, where was a collection of corn- and sawmills. The records of the period designate Nathaniel Austin as a "dish turner", and he seems to have been established at this point, possibly in connection with a corn-mill shortly after owned by him.

In the making of wooden dishes, the English took a page from the book of the Indians. John Josselyn in 1674 mentioned "the dishes and trays wrought very smooth and neatly out of knots of wood" by the natives. These, however, were made by burning and scraping, being deep dishes, such as we would call bowls, but with a turning lathe, it was feasible to use hard maple for the making of shallow flat plates to supplement the pewter ware of the household.

The Rev. Stephen Williams, the "Redeemed Captive", pastor of the church at Longmeadow, was taken captive and carried to Canada by the Indians at the sack of Deerfield in 1604. He was later redeemed and married Abigail Davenport, July 3, 1718, two and a half months before the gracious presentation of these two commemorative spoons. Query,—Where are they today?

In September, 1779, Francois, Marquis de Barbe-Marbois, passed through Springfield, enroute to Philadelphia, with the suite of the newly-arrived French minister. Some of his comments add to the picture of travel conditions at the time of the revolution. Pages of his journal read:

Weston, September 4, 1779.—"We left Boston at five in the afternoon in a carriage drawn by six horses and we are to pass the night at Weston. We have provisions of all kinds and shall renew them each time the occasion presents itself."

Worcester, September 5.—"We dined at a pretty village, fairly large (Marlboro), and passed the night at Worcester."

Brookfield, September 6.—"Many stones and granite rocks on the surface of the earth. There are no tolls at any of the bridges, no seignioral rights on entering one district or leaving another, no great or little salt taxes, no Dutch tobacco shop, no contrabandists, no gamekeepers or forest guards. We arrived very early at Brookfield where we were to sleep."

Springfield, September 7.—"We left the beautiful valley and entered into rocky and rugged mountains. The road was extremely difficult and not without danger. One of our coaches turned over and there was trouble getting it back on its wheels. Woods are omnipresent, habitation more rare, scenery wild.

"At last we see Springfield and the banks of the Connecticut bathing it; here, fatigued by the dryness of the country which we have just crossed, we find population and culture as of the most beautiful places in Europe, and the dwellings are so close together that one could compare the two banks of the Connecticut from Springfield to Hartford, in a space of six leagues, to several contiguous villages."

Hartford, September 8, 1779.—"Two leagues above this city there is a waterfall which prevents ascending the Connecticut. It is navigable as far as Suffield, and we took the opportunity to embark in a long boat covered with freshly cut leaves, while our horses and coaches proceeded leisurely by land. This navigation is charming; the current is a little swift, but with four rowers we made a league and a half an hour. The river is a quarter of a mile wide and the banks are covered with fine forests; they spread on the right bank a thick shade, which invited us to land for dinner. The turf served for a seat, a fallen tree took the place of a table, large leaves were converted into plates, and our wine was cooled in a neighboring spring. We shared with the sailors our pates, fruits, and Burgundy wine from our canteen. Wood nymphs would have been astonished by the novelty of this repast.

"We went back to our boat and, following our custom, made our rowers talk; we learned that one was Scotch, another Irish, a third from Anspach (Bavaria), and the last Hessian.

"You must know that our coach driver and postilion are deserters from the German-English troops, as are our four rowers, and that among the horsemen who form our escort three quarters are English

and only the rest are Americans. It will appear amusing that in the present circumstances the Minister of France is conducted on sea and land and served by men sent at great expense to America by the English Government!

"Arrived at Suffield, we were informed that we could not go down the Connecticut as far as Hartford without the risk of hitting some rocks. Our protectors had no trouble in persuading us that we were extremely precious beings to the American Republic, and we returned to our coaches. Despite their prudence, our welfare was imperiled, however.

"We were alone, Monsieur de la Luzerne and I, in a four-wheeled cabriolet of very light construction. The militia of the place assembled on the occasion of a halt which we believe was due to the English; a company formed and presented arms to His Excellency. The noise and the sudden movement of arms frightened our horses, and as at the same instant, in order to do us more honor, they fired a cannon, the animals took the bits in their teeth, broke their reins, and dragged us over ditches, hillocks, and rocks. We had a precipice before us toward which they were running, and we were thinking of jumping to the ground when a dragoon from our escort, galloping to the horses' heads, pressed them up so roughly that they stopped. Things were adjusted as well as possible, and at last we arrived at Hartford.

"We are treated with great familiarity, but with so much innocence and simplicity that we should be very hard to please if we took it in bad part. Travelers seat themselves at our table without having been asked there, and they are not always the best company. Sometimes teamsters, after having put their carts under cover and given oats to the horses, place themselves next to us without ceremony.

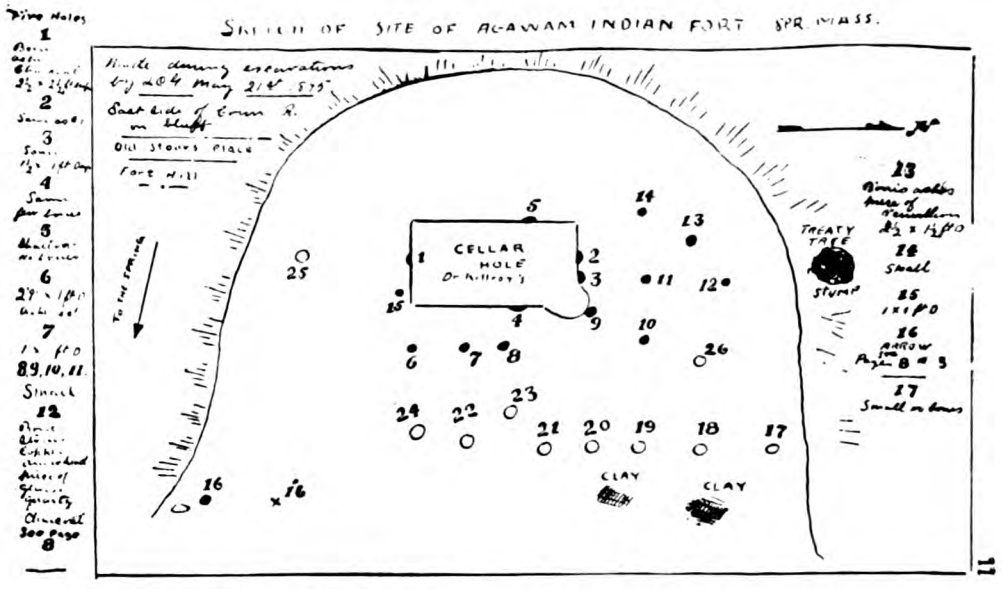
"I dined at Hartford with several inhabitants of the city. One evening I was seated next to a pretty miss, young and attentive, who had a strong desire to please. Only one thing caused me some impatience: I was dining with extreme appetite, but she pretended not to believe it and waited with indefatigable care for the moment when I was about to change my plate to tell me that I was not eating and to assure me that the turkey, game, and pudding were excellent, and that I must absolutely eat some.

"Without wounding the modesty of an American lady one cannot pronounce the words 'legs, knees, chemise, garters,' and a number of other words equally unoffensive to our ears; but we can propose to a young lady to 'bundle'; not only is she not offended, but she regards this proposal as politeness, and sometimes this strange favor is accorded to a traveler, even one she does not know very well. It is difficult to reconcile this general usage with the severity of manners and a natural shyness about sex in North America."

In 1784, a young Englishman named Joseph Hadfield came to America for the collection of debts owed by merchants since before the Revolutionary War. Being an educated, traveled person, he took

advantage of the opportunity to study the new country and left this description of a journey from Albany to Boston.

September 3, 1785.—"This morning we left Albany in a wagon and crossed the Hudson river. Stopped to rest our horses at Schodock, 14 miles from thence and continued on to Kenderhook Mills, six miles from which place we proceeded to Clinnock Hill, 4 miles. Here we dined at a tolerable, kept by Ostrom, a Dutchman. In the evening



Page From Field-Note Book of Lewis Corbin Grant, 1895

Plan of fire holes disclosed by explorations on Long Hill.

we proceeded to the stone house of Clavernack, 6 miles, kept by a Dutchman. This is an excellent house. Good beds and agreeable accommodations. We met with nothing this day worth recounting. The country in general is barren and our route through woods of pine trees."

September 4.—"We left Hogaboon's at 6 o'clock and continued on our route to Capt. Bottel's, four miles. Here we breakfasted. A very good house. From this we went to Great Barrington, to one Timothy Younglove, an indifferent place. There is a pretty church and village here. In a delightful situation at the bottom of some very large mountains. About eight miles from here, before we arrived, is Tockhannock Mountain. From Barrington we proceeded to Sheffield, a most beautiful village.

"We had scarce got half way through the village when we were stopped on the public road by Justice Barnard who took us to task for travelling on Sunday. It was impossible to satisfy him that we were strangers and wished to get forward as fast as possible. He

insisted upon our remaining at a tavern until sunset and we were obliged to comply as he had the means of enforcing his demands. We went from this eastward, over some horrid hills and bad roads to Marlborough, a small village five miles. Here our horses as well as ourselves, being fatigued we took our night's lodging. Our ride this day had been over some very high mountains enveloped with woods so that we had no variety."

September 5.—"At six o'clock this morning we left New Marlborough and began one of the most fatiguing journeys I ever had in my life. We came to Sandisfield, eight miles where we breakfasted. From this to one Fowler's at Granville (now a part of Tolland), a tolerable good house, eight miles, and from this to Bates in Granville, pushed five miles further. The route and the road was one continuous chain of mountains tremendously high, the roads and country around nothing but stones and rocks, so bad that I was obliged to walk seven or eight miles. To attempt a description of the inconveniences and misery of this journey would be impossible. I can only say we arrived safe and without accident.

"Mountainous as the country is, they are settling it very fast, for the soil is proper for wheat. The grass which grows here is remarkably sweet and fattening. In consequence, large quantities of cattle are sent from different parts to be fed here."

September 6.—"We left Granville at 6 o'clock. We found the road very bad for about 4 miles, when we descended from the mountains into a charming vale full of settlements. The lands are highly cultivated. Each farm has an extensive orchard. We continued this pleasing ride which appeared still more so from comparing it with the barren hills that we had been among so long. We passed a small river just before we came to Westfield and here I cannot say too much for the charming village, the inhabitants of which are mostly farmers. Their houses are really elegant, far above rural simplicity, yet their neatness, being all painted, conveys all these ideas that arise from the consideration of arcadian dwellings. I was delighted with the spot. We stopped and breakfasted at one, Fowler's, who keeps a very good house. Westfield is 10 miles from Granville. We continued our route through this delightful valley and crossed the river about a mile off. The country and prospect around were grand, the whole bounded by some high mountains, at a great distance.

"We came to West Springfield, situated upon the Connecticut River. Here are many good dwellings and agreeable appendages. We crossed the river in a scow, a flat-bottomed boat, to East Springfield and arrived at Parsons' Tavern, being ten miles from Westfield.

"We discharged our waggoner, Bradt, whom we had brought from Albany, having been four days. Paid him seven pounds, New York currency, for the trip and backwards, allowing the same number of days to return.

"Were unfortunate in not being able to hire a waggon to proceed with us. Walked out to several farmers but were unsuccessful. In the evening Hunter and I strolled about the town which is a long,

straggling place. There is a court-house and church, two good handsome buildings. The houses in general here were very good, the appearance resembling some of our villages in the neighborhood of London. In the evening we engaged one, Morgan, to convey us to Boston—nineteen dollars."

September 7.—"We left Springfield at 8 o'clock and pursued our journey upon a hill about half a mile from the town. There are several buildings which serve as arsenals for their cannon, muskets and all sorts of warlike stores. They have chosen this situation, being so far inland and, therefore, less liable to invasion or to be destroyed by the enemy.

"We met with nothing in the remainder of our ride to Wilbraham (10 miles). This is only a small village. We turned into the Hartford Road for about half a mile, in order to get a covered waggon from a relation of our waggoner, his being open and heavy. This we effected and returned to the great road to Boston, which we continued for five miles to Palmer, to a tavern kept by one, Scott, a tolerable house. Here we dined. The road and country was uninteresting until our arrival in the vicinity of this place which is beautifully situated on a declivity of a hill near by the delightful River Chickapee, which runs in the most astonishing meandering course I ever saw, seeming to play through the vale which is surrounded by very high mountains.

"We were obliged in the course of this day to cross at least six or seven times, until we lost it in some small lakes at Brookfield. From Palmer we went to Brookfield, (15 miles) and stopped a few minutes at Rice's tavern to rest our horses. We then proceeded with our intention to go to Leicester, but finding the road very bad, which had been the case most of the day, being very stony or deep sand, we put up for the evening at Col. Reed's, who keeps a tavern about two miles farther on. Here we remained the night. A good house and excellent accommodation. The situation is very good, being upon an eminence commanding a fine prospect."

September 8.—"We left Col. Reed's at six o'clock. Met with nothing material until we came to Spencer, about 8 miles. This is a small village. There is a very handsome church building here. The tavern is kept by one, but we did not stop. We proceeded on our route to Bruce's tavern, where we breakfasted; a very good house, delightfully situated upon an emminence commanding a very extensive prospect.

"We left this about 10 o'clock, passing through Leicester, a small village. Nothing remarkable within sight of Bruce's. The next place we came to was Worcester (7 miles), a country town most pleasantly situated, several good houses, an excellent tavern, church and court-house. At the latter and in the town were assembled a great number of people, it being court day. This place is really replete with charm and simplicity. The country round is well settled and a number of agreeable objects, such as mountains, hills clothed with one continued verdure, either from trees or pasture, and a number of good houses, commanding a view of the town. We killed a large black snake on the

road. We did not stop at Worcester but proceeded on to Shrewsbury, a very small village, 7 miles farther, and put up at Farrer's tavern, a good house. On this stage we met with nothing worth remarking except a very delightful sheet of water or small lake within three miles of this place. It is about 7 miles broad and 5 miles long, surrounded by hills covered with rich foliage and without settlements. We had several good views on the road. We continued our route to Norbury, a village four miles off, and from there to Marlborough, 6 miles. About one and a half miles before we arrived here there is a small lake, pleasantly varied in the scenes around. We stopped at Col. How's tavern, a tolerable house, where we were kindly received. There are three remarkable figures here. The landlord is 6 ft. 6 inches high, the landlady is remarkably large, weighing 288 lbs., and the third is a beautiful daughter who, I may justly say, might challenge the universe for a more perfectly natural model for symmetry of features and shape. She had a sister who is nearly as handsome."

September 9.—"We left Marlborough at 6 o'clock and met with nothing worthy of notice except an intolerable heavy sandy road to Sudbury, 7 miles, where we stopped to breakfast. From thence to Waltham Plains, 10 miles. Here we dined at a miserable house kept by one Gleason, and continued our route. The roads still were so bad that we advanced very slowly. We met with nothing remarkable until we arrived within 4 miles of Boston when you have a distant view of the place. But this is an imperfect one. You have, however, a most extensive view of the town, about 2 miles. It appears to very great advantage, but the greatest part is interrupted by some hills to the west side of the town, which is built on a peninsula which widens from a narrow causeway to the extent of ground upon which it stands.

"We found our walk very tedious, being full two miles to the town where we ordered our servants to stop and await. We were mortified by not finding any accommodation. I then went in search of my friend, Mr. Samuel Elliott, whom I found and who welcomed me with the most sincere congratulations. He procured us lodgings at Mr. Cotton's, a most genteel house, and as we were most fatigued, took leave of us, not before he made us promise to dine with him to-morrow. We soon retired to seek that repose we so much wanted."

The Federal Congress, sitting in New York in 1790, adjourned on August 12. The previous year, President Washington had pointedly avoided visiting Rhode Island on his tour of New England, because that state had failed to ratify the Constitution. Ratification having been brought about on May 29, 1790, Washington decided to make amends and on Sunday morning, August 15, 1790, he sailed from New York on the packet *Hancock*. Accompanying him by invitation was William Loughton Smith, Congressional Representative from South Carolina. On the following Thursday, Washington embarked for the return trip to New York, while Smith continued through New England, leaving the following account of his experiences:

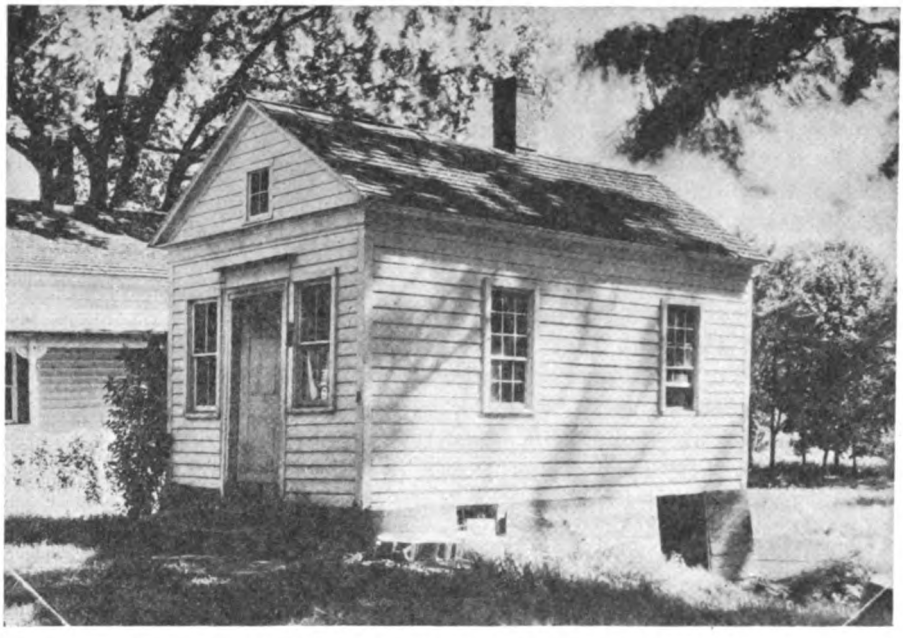
"Wednesday morning, August 25, we set off from Hartford for Springfield. I breakfasted with Mr. Oliver Ellsworth, member of the Federal Senate from Connecticut, at Windsor, ten miles from Hartford, where he has a comfortable, neat house on a pleasant little farm. I then passed through Suffield, a pretty little town situated on an eminence and commanding a pleasant and extensive view. The meeting house is at a little distance a fine object, being situated on very high ground. Passing on to Springfield, I crossed the Connecticut river which is wide here and then entered the town, which is a pretty considerable one. Here are some public stores of arms and accouterments and cannon belonging to the United States, kept in very good order. I think there were 8000 stands of arms and a large quantity of gunpowder. In the rebellion in Massachusetts in 1787, Shays made an attempt on this place, but though superior in force to the Government party, was completely routed at the first shot from a piece of cannon, which killed a few of his men. He fled with great precipitation and some of his people did not stop till they had travelled upwards of forty miles that day. I saw two stockade forts which were hastily erected for the protection of the stores and are still standing. The public stores are on an eminence just above Springfield, which commands a fine view of Springfield and the adjacent country, which is highly cultivated and pleasing. I drank tea with Miss. Worthingtons, daughter of Col. John Worthington, one of the most reputable characters of this part of the country. His third daughter, Frances, it is said is about to be married to Mr. Fisher Ames.

"The journey from Hartford to Springfield is a most agreeable one, through a thickly settled country, well cultivated and over good roads. The river makes its appearance now and then, and there are some distant mountains which terminate the scene agreeably. Thursday I left Springfield and crossed the river, intending to take the road to Northampton, having been informed that it was a very thriving town, in a beautiful country, but my driver having mistaken the road, carried me within a few miles of Westfield, to which I had intended to go from Northampton, and being apprehensive from his ignorance of the roads of encountering similar difficulties in other places, I proceeded to Westfield, where I got to breakfast. The country hereabouts is romantic, a river called the Westfield river is seen through the woods and the prospect, which is limited, is terminated by high mountains. Westfield is divided by this river and is a large settlement. It is nearly at the foot of the mountain, which must be crossed in progressing westward. It is a continuation of the Green Mountains. Any communication to the east and west of this long ridge is attended with difficulty as the crossing of this mountain in any place is bad and troublesome, particularly with a carriage. I was in a four wheeled carriage, and unfortunately selected the worst place, intending to go from Springfield through Stockbridge to New Lebanon, where I expected to meet my family who had gone there from New York.

"Leaving Westfield I coasted along the river through a very bad but very romantic road. It is over rocks and through a thick forest; on one side high mountains clothed with woods to their summit; on the other the river just below, running rapidly over a bed of rocks and high mountains covered with impenetrable forests rising on the opposite shore. I then crossed a large wooden bridge and having the river on my right, began to ascend the Green Mountains. For miles the badness of the road exceeds description. We ascended for five miles a steep mountain, which took us four hours. The prospect consisted of nothing but other mountains rising one above the other, rocky and bleak, here and there the appearance of a new settlement in the woods.

"We then got to a place called by some Glascow, but by others Blandford street. This is for a few miles a tolerably level country, the prospect commanding. From Blandford Street we proceeded on towards Becket; for a mile or two the road was tolerable and the prospect fine, on the right an extensive view of a well-cultivated country, and many waving hills. We then entered a wood and had for about six miles the most execrable road that was ever traveled by a carriage; a narrow track through a forest, the path full of huge rocks and loose stones, up and down hill the whole way; I trembled every step of the way lest the carriage should be shattered or the horses give out: we were obliged to quit the carriage and walk the whole way. I could only advance at the rate of a mile an hour. With much difficulty we reached a tavern kept by one Foley, five miles from Blandford Street, where I put up that night, and contrary to my expectations from the external appearance of his house, got a decent supper and a good bed. He was settled in the midst of the forest, surrounded with rocks and woods, and his habitation had the most dreary appearance. He however made a subsistence, raised plenty of grain, and made his own sugar from the maple trees. This practise I found very common; the forest in this part of the country abound with the maple and sugar is extracted with great ease. Early on Friday I proceeded on and had about two miles of road, if possible worse; with much care the carriage was got through without damage, and then quitting the forest we arrived at Becket, where lives one Perkins, who informed me that it was impossible to get along to Stockbridge with my carriage in the direct road, and that my only route was through Pittsfield. I therefore immediately resolved to alter my route and proceed on to Pittsfield and New Lebanon, and from thence take a ride to Stockbridge. Becket is a small town situated on very high ground, being nearly the highest part of the Green Mountains; the country around it appears well cleared and settled in comparison with the wilderness I had just left. In the road from Westfield to Becket little else is to be seen but forests and rocks, with here and there a new settlement and others just forming. The whole has very much the appearance of a country in its infant state.

"I left Connecticut between Windsor and Springfield and continued in the State of Massachusetts till I had left Pittsfield; the New York line is between that place and New Lebanon, which was formerly part of Hancock, being considered in Massachusetts, but on running the line it is found to be in New York. From the town of Becket, a well-cultivated country appears at a great distance to the northward and considerably below Becket, which however is surrounded by hills which have a black aspect. The road here improved a little, though still hilly and rugged. We went on seven miles to Washington, a small



Parker L. Hall Law Office, Sheffield

town, where we breakfasted at a Widow Milligan's whose accommodations surpassed the expectations the exterior of the house had excited. Her husband and herself had emigrated from Ireland about twenty odd years ago, and first settled at Hartford; they then purchased a farm in this new country. They left Ireland because they wished to be independent landholders instead of oppressed tenants and because they paid heavy rates, but she said she began now to find little difference between this country and Ireland, for what with the state taxes, county rates, poor rates, church rates, school rates, and road assessments she found taxes very heavy; her tax amounted to about five pounds lawful money and her farm was small. They came from the north of Ireland, and were Protestants: she spoke with a strong Scotch accent. Proceeding on to Pittsfield, the road improved so much that we were able to trot, which was a considerable gratification to me, as for nearly two days we had only gone at foot's pace. Passing

through a wood, we suddenly arrived at the edge of the mountain on which we had been since the preceding morning, and had a most enchanting view of the prodigious extent of country, cultivated throughout and intermixed with woods. At a great distance below us Pittsfield appeared beautiful in this plain and the whole afforded a rich scene, strangely contrasted with the gloomy forest and uncomfortable rocks we had left. I dined at Pittsfield, which is a pretty town, and sat off in the afternoon for the Pool or New Lebanon, where I arrived at dark, having travelled the whole distance in a heavy rain, which prevented my seeing the country, but the following afternoon, I took a ride towards Pittsfield which is separated from it by a very high mountain, from the top of which I had a very pleasing view of Pittsfield and the adjacent country which is well settled.

"Monday morning, August 30, I went on horseback to Bennington and returned on Tuesday; the ride is a very agreeable one. Quitting Lebanon, you proceed through a narrow vale to Hancock, having on your left a distant view of the Meeting-house at Septhenton on an eminence. A well-cultivated country the whole way; in same places are seen the most beautiful vales, in others variegated hills, some cultivated to their summit. Fifteen miles from Lebanon we breakfasted at Sloane's tavern at Williamstown, in Massachusetts. The principal part of the town is about four miles further on, where they are building a handsome brick college, seventy feet by fifty and three stories high, a donation from Mr. Williams, from whom the Town took its name, is applied by his executors to the erection of this college, which will be in a fine, healthy country.

"Saturday, September 4. After dinner, accompanied by Mr. H. Izard and Mr. J. Smith, I rode to Stockbridge on a visit to Mr. Sedgwick, we passed through the Shaker settlement and then ascended a high hill, from which the prospect of the settlement and the distant hill, highly cultivated, is charming. Passing through a woody country we soon arrived at Richmond; a town of great extent and straggling settlements; the lands appear good and the ground is much cleared, and the prospect of the well-cultivated plain is pleasing. Quitting Richmond we arrived at some iron works, and then traveling through a thick wood, had from an eminence a fine view of Stockbridge which is a very large settlement, containing some handsome houses, among which Mr. Sedgwick's is for size and beauty the most conspicuous. The lands are also good here and well-cultivated and the extensive plain thickly covered with settlements and encircled by fine romantic hills presents an agreeable scene. We supt and slept at Mr. Sedgwick's, and after breakfast the next morning returned to the Pool, having stopt about an hour at the Shakers' Meeting house to take another view of their ridiculous worship. Stockbridge is about sixteen miles from the Pool.

"Tuesday, September 7th. Early in the morning we left the Pool for Albany, the distance about thirty miles. The road for about

fifteen miles is bad, hilly, and rocky, and traveling in a wagon without springs was extremely rough and unpleasant. The first part of the road is through a wild country, where new settlements are just forming along the brow of wooded hills or on rich vales; the wildness of the mountains and the multitude of the stumps yet remaining on the cleared ground give a gloominess to the prospect of this country, which in a few years will doubtless be a beautiful one, for the land is good and it is fast settling. We passed by Schermerhorn's mills and soon after ascending a high hill enjoyed from its summit a prospect of very considerable extent, terminated to the left by the lofty Kaatskill Mountains. We dined at Tobias' tavern at Phillipstown, kept by an impudent woman, where we were badly entertained. Thence to Albany the road is good, the country becomes more level as you descend towards the river; we passed through several woods and I observed that the land did not appear so good and was more thinly settled than I should have expected at so short a distance from the river. When within a mile of the river, arriving at the edge of a hill, a most delightful view suddenly presents itself, consisting of the noble river of the Hudson gliding smoothly along and carrying on its surface several vessels, the city of Albany in the midst of a verdant and fertile country, several handsome mansions on the river side, particularly Gen. Schyler's, which makes a noble appearance and is delightfully situated; the sloping hills on each side of the river highly cultivated, and the scattered farms with cattle grazing in the meadows, the whole terminated by distant hills and a fine view of the Kaatskill mountains. We crossed the ferry and entered Albany early in the afternoon."

At that period, no public funds were available for the building of new roads or improving existing ones, but there were numerous groups of private capitalists ready and eager to undertake such a task for personal profit. This situation led to the building of a series of interlocking turnpikes in Connecticut and Massachusetts.

Primarily, a turnpike was a frame of pikes or pointed bars set in a narrow passage to obstruct or turn the progress of an enemy. A modern adaptation of the idea is seen in the turnstiles in use in railroad stations. As used in connection with road travel it took the form of a gate which barred passage until proper toll was paid for the privilege of passing over the road. Hence, in time the toll roads themselves came to be called turnpikes which eventually became abbreviated to the familiar form of pike.

In Massachusetts, the earliest of these projects was designed to amend the rocky and dangerous public thoroughfare from Warren to Palmer, which was later extended to North Wilbraham. Officially designated as Turnpike Number One, it was incorporated in 1796, the preamble of the document reciting that "whereas, the highway leading through the towns of Palmer and Western (now Warren) is circuitous, rocky and mountainous and there is much travelling over the same,

and the expense of straightening, making and reparing an highway through these towns, so that the same may be safe and convenient for travellers with horses and carriages would be much greater than ought to be required of the said towns under their present circumstances", therefore, the First Massachusetts Turnpike Corporation was created and authorized to lay out and make a turnpike "from Western (Warren) Bridge, near the Upper Mills, so-called, in Western, to the county road, near the house lately called Scott's tavern in Palmer".

The successful contractor's bid for the first section of this road was nine hundred sixty dollars per mile, three rods in breadth. In 1798 the General Court allowed an extension of the road to North Wilbraham and four miles of this, including one-half mile along the Chicopee river, where the mountain approached so close to the river as to make necessary a cut and retaining wall ten feet high, was contracted for at six hundred forty dollars per mile.

Scant knowledge of road building was at the disposal of the contractors or the financiers. Little was known of proper drainage. Then too, there was a sizeable amount of downright dishonesty. Stumps and limbs of trees were used for filling, and when this material rotted away it left pits and holes which required additional filling. The call for repairs was constant and as their cost was greater than the tolls gathered, the roads were soon abandoned by the stockholders and thus they reverted to the Commonwealth.

From Warren to Palmer, the turnpike was established on the north side of Chicopee river. Crossing that river on the easterly outskirts of Palmer, the road kept to the south of the stream for the balance of the way to North Wilbraham. The existing records do not indicate how long the corporation continued to operate the road, but apparently the unit ceased to be shortly after 1820.

Boston Post Road

Springfield to Brookfield

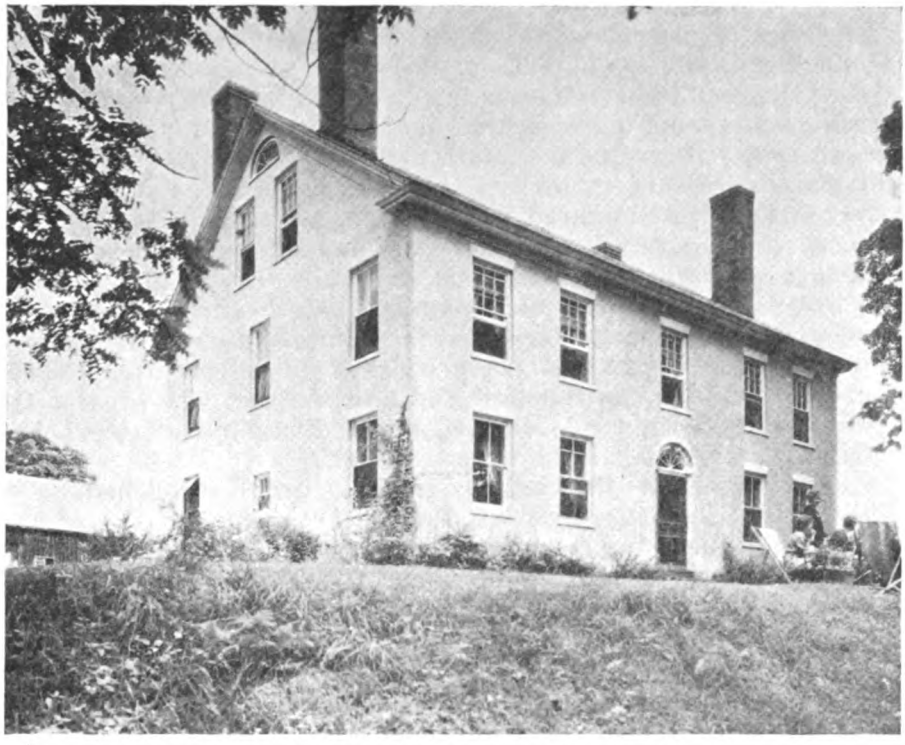
By William R. Carlton

The Boston Post Road was the last of a series of paths and highways developed in colonial times for travel between Springfield and Boston.

There is no real reason for thinking that there was a path, as such, from Boston to the Springfield location before the English first made their settlement on the Connecticut. There would be no reason for such a path. The intervening countryside was open and free from heavily wooded areas so that travel was easy and no path was needed. The natives were of such low order of intelligence and of such aimless disposition that continued trade or barter was practically unknown. Any of the early writers who had association with them or were captive to them vouch for their worthlessness. They were "vile rout" and hardly above the dogs in their habits. A path

continuous for ninety miles, from nowhere to nowhere, is and was then, unthinkable.

However, the area around the Chicopee River from its mouth at the Connecticut to the falls at Three Rivers was known to be the greatest fishing place in this section of New England, as the old records indicate, so there were doubtless general ways of travel from all directions into that area and it may be that the first English



Mary Lyon House, Buckland

settlers used these routes when coming towards or leaving the location.

How all of the first settlers came we do not know. The Pynchons sent supplies by water from Boston around the Cape, through the Sound and up the Connecticut River. Some English doubtless came that way. Others traveled overland but by what route is not positively known today.

The first man to leave a written record of each day's travel overland to Springfield was John Winthrop, Jr., in 1645. His route was from Boston to Webster, Southbridge, Fiskdale, Palmer (South of the Quaboag) and Springfield and this was doubtless the first well developed route.

The "Bay Path" tradition was first referred to in writing November 3, 1646, in connection with the making of tar. It doubtless

followed the same path Winthrop used and was approximately the same as the present (1949) road to North Wilbraham but from there, for a few miles, it followed a route of its own, mostly across fields, pastures and hills where no road goes today although its location can be quite easily followed: See *Bay Path and Along the Way* by Levi Badger Chase. Although Mr. Chase is not always accurate, this section is taken from original deeds and can be relied upon. From North Wilbraham the path went over Bald Peak, southwest of Palmer, and continued, south of the Quaboag, to go over Steerage Rock mountain and thence through Fiskdale just north of Alum Pond. It then bore to the southeast, to follow the Quinnebaug River through Sturbridge to Southbridge where it veered to Webster, crossing Lake Chaubunagungamaug, at the upper narrows.

The path as described above was very hilly and a hard way to go, so at about the year 1647 a new way was found which avoided the hills and which also went to the new settlement at Brookfield. This road was probably laid out by or under William Pynchon's guidance and was a great improvement.

Instead of going over the Steerage Rock route the new way forked north at the foot of Fenton Mt. near the "Elbow" (between Palmer and Warren the Quaboag suddenly turns a right angle or elbow going from its up-to-then east-west direction to a north-south direction) and followed the south side of the river to Blodgetts Brook where it turned eastward, up through the hills to emerge half way between Warren and West Brookfield to follow a route nearly identical with the present State Road to Brookfield. This road was later improved by John Pynchon and was sometimes called Mr. Pynchon's Road. It was upon this route through the hills that Captain John Parker received his six-hundred-acre grant for his services in taking ship masts to England during the dangerous days of the Dutch Wars.

In 1731 this old original road to Brookfield was improved and became known as the "County Road." From Springfield to Palmer it followed about the same route as will be described later but instead of going south of Palmer through the State Hospital grounds as the Bay Path did it crossed the river into Palmer near where the present bridge is (1949). Beyond Palmer the route was different than at present and was the same as will be described below.

The Boston Post Road was a successor to the County Road.

It is easy to trace the route of the Post Road from Springfield eastward.* As early as 1755-57 milestones were placed along the route and are shown plainly on Ensign Francis Miller's survey of 1764-1765. It is said that these milestones were located by Postmaster General Benjamin Franklin who traveled the route in a carriage with a special wheel attached which measured the miles and showed where the stones should be placed. Many of these stones are still standing. They are of red sandstone with the miles still plainly marked thereon.

*The westward route to Albany has been described by Harry Andrew Wright.

The first one eastward from Springfield center is at the top of State Street Hill within the Armory grounds (where the road ran in those days) and reads "91 miles to Boston".

The next eastward is many miles away on Reed Street in Warren, now a rural area but with the roadway still in use (about two miles south of West Warren on high land). Eastward through Brookfield and Spencer there is an unbroken line of eleven posts all in their places and from Spencer onward to Boston there are many still standing.

There are numerous interesting localities along the old Post Road which may be worthwhile to note. Just past North Wilbraham, where the road runs along beside the river, on the right hand side near a house and small store (1948) there may be seen a stone-arch bridge made of uncut stones. Here the old road descended the hill after passing through the town on the street which bears right and up a slight grade as the village is approached. The old road followed along until the village was passed then turned left and descended to cross this bridge. Crossing the bridge the road joined the present highway. The old road after passing North Wilbraham did not go along beside the river. This section was authorized in 1796, and cut around the ledges which formerly descended directly to the river bank.

Between North Wilbraham and Palmer the Old Post Road was much more curved than the present one and in places can be seen (old and narrow) swinging first to one side and then another. In some spots stone embankments and culverts may be seen, built to support the road on the sides of the hills. Just West of Palmer on the north side of the road there is an old elm and a marker noting the spot where Washington rested on one of his two trips over this road.

The old route through Palmer has been lost by the building of the town, but just beyond the outskirts we pick it up where it swung away northward from the present way and took an almost straight route to emerge again near the spot where the present route crosses Kings Brook. This old route is partly obliterated but can be followed in places over present roads.

Just beyond Kings Brook the Post Road crossed the Quaboag River by a fordway and if we cross by the nearby bridge, the old way can be seen crossing a field after emerging from the fordway. When the railroad was built in 1839 a grade crossing was made here beside the older way, which the fill of the railroad bed covered. This little stretch has been long abandoned.

Eastward, from where this old section joins the present road, the route was about the same as now. At the old "Powers Corners" the road turns right up into the hills. This was the section which Washington said was so hilly and rough. Going up the hill and continuing straight ahead one comes to the bridge over Tufts Brook at the lower end of the large meadow. Here the present road was swung to the left but the old road went straight ahead, through the

present bars and up a very steep hill. Halfway up a space was excavated and widened for the coaches, carts and lumber sleds to turn left for the next pull and to rest horses or oxen. The road in this section can still be followed through the pasture land. This was a continuance of the present Reed Street and the abandoned section joins the present road at another bridge over Tufts Brook and continues on up another hill to the present Reed Street.

Passing through Reed Street (we pass the aforementioned mile post) we come to another abandoned section and one of considerable interest. At the eastern end of this wide straight street the present road turns northeastward. The old road here continued straight ahead. Bars now (1949) close the entrance but the road can be easily followed on foot up and over the hill. Descending the other side, the hill suddenly becomes very steep, too steep to allow for a roadway, and here again a wide turn was made but here the slope necessitated a side retaining wall of considerable height and length to hold it and the road (which turns left a bit more than at right angles) descended steeply down a narrow, rocky gulch. This was a famous point on the road and was called "The Devils Elbow". A tavern was at the foot of the hill.

Beyond the tavern the route is somewhat debatable. The late Sumner Reed of Brookfield believed that it continued eastward over land and a brook now covered by Comins Pond in Warren, but Gen. Rufus Putnam's map of 1764 would indicate that it swung northward at this locality to cross the brook in the vicinity of the Warren Town Hall and then continued over the approximate route now followed by the present road. It may have swung southward again up the hill then bore eastward following the road upon which Mr. Reed located or caused to be located the seventy-fourth milestone.

At any rate it soon rejoined the present route and followed it through West Brookfield Village. Just at the edge of the village however, it left the present route and went straight ahead over Forsters Hill where the original Brookfield settlement was located and where the settlers so courageously held off the Indian attack of August 2, 1675, until the savages, discouraged, slunk away when Major Willard and his men arrived in time to save them.*

In the days before and during the Revolution this Post Road was a very important east-west link for the colonies. Over it went the Maine and New Hampshire troops westward in the French and Indian Wars. During the Revolution many of the captured Hessians passed this way. It was a main artery of the young nation. Its wares, supplies, its men and its families passed over it.

Turnpike Number Two.

In 1797 the Second Massachusetts Turnpike Company was authorized to build a road "from the west line of Charlemont to the west foot of Hoosuck mountain in Adams". This route was the predeces-

* See "Capt. Wheeler's Narrative", Temple's *History of North Brookfield*, page 80.

sor of the Hoosac Tunnel and the road over the mountain became that of the Mohawk Trail of modern times. Like so many turnpikes it never was a paying project and in 1833 the corporation was dissolved and the road made free.

In 1829 this turnpike was traversed by Mrs. Josiah Quincy, wife of the president of Harvard College, with her daughter Sophia, and the latter kept the following account of her experiences:

"On the morning of August 3, 1829, at six o'clock the inmates of the President's House in Cambridge were all in motion to assist Mama, Anna and myself to prepare for our journey to Malta, in the State of New York. At eight o'clock a light traveling carriage was at the door, trunk fastened behind, while portmanteau and bag were secured on the front, and bundle, bandbox and books occupied part of the interior of the equipage. The day was very fine, the road level and free from dust and we rolled along delightfully through Watertown, Waltham, Lincoln to Stow, twenty miles from Cambridge, where we arrived at half past one o'clock. As the day had become quite warm we decided to stay till four o'clock and accordingly had dinner, after which Mama and Anna retired to lie down and I established myself in a rocking chair at a cool window, reading 'Gil Blas' till the hour of setting off on our journey arrived".

An afternoon drive of twelve miles brought them to Lancaster where they spent the night. Through August fourth, the journey continued to Leominster and Athol, where the night was passed at Mrs. Young's tavern. Up at six on Wednesday the fifth, off at nine, Anna with a bad headache, and on to Winchester, New Hampshire for a midday rest.

August 5.—"After dinner I read and slept in a rocking chair till four o'clock. Mama deferred setting off till five. We passed the hour in chatting with the mistress of the house who was quite a sensible woman, and in seeing a young girl spin. At five we set off again—the afternoon beautiful, but excessively warm. We had a most delightful ride to Brattleboro, twelve miles. The road lay along the high bank of Ashawillet River, a romantic stream with wooded banks and high hills beyond. Mama said it was exactly like the country on the banks of the Mohawk. As we approached the town we left the river at some distance and rode through beautiful groves of trees, looking down over a valley which looked like a perfect Eden. We again came down on the Ashawillet, which had spread to quite a wide and tranquil stream, and crossed it where it falls into the Connecticut. We passed on over an arched bridge thrown over the latter river, and ascended the hill on which Brattleboro stands, and drove up to the stage tavern, which had been recommended by Mr. Carter, at eight o'clock.

The piazza of the house was filled with men walking, talking and smoking, and on enquiring of the man of the house whether he could furnish us with accommodations, he told us that he could not advise

us to stay with him as the house was full and he expected the stages to arrive in the course of the evening. This was not very encouraging but as Anna had suffered dreadfully with the headache all the afternoon, and was hardly able to sit up, we decided to alight and do as well as we could. So the baggage was taken off, and we were shown upstairs to a large and rather comfortable chamber, in the front of the house directly above the piazza. Anna went to bed immediately, and Mama and I, after arranging our baggage, went down to tea, after which we retired to bed but not to rest. Such a night certainly never did I pass, and Mama and Anna agreed that in all their experience the noise of this house was unparalleled. Stage after stage whirled up to the door and let loose a host of passengers, those who could be accommodated in the house trotted up and down stairs, patroled over our heads, and scampered along the passages literally the whole night, while the piazza below was filled with walkers and talkers who, I presume, could find no other resting place, as they remained enlightening us with their respective opinions on a variety of subjects till I really thought we should have lost all patience. Anna was really very sick and the incessant noise disturbed her so much that she could get no rest. Among other arrivals was that of the steam boat, which for our accommodation made its first trip this season from Hartford to Bellows Falls, and brought a goodly number of voyagers to increase the quiet of our slumbers.

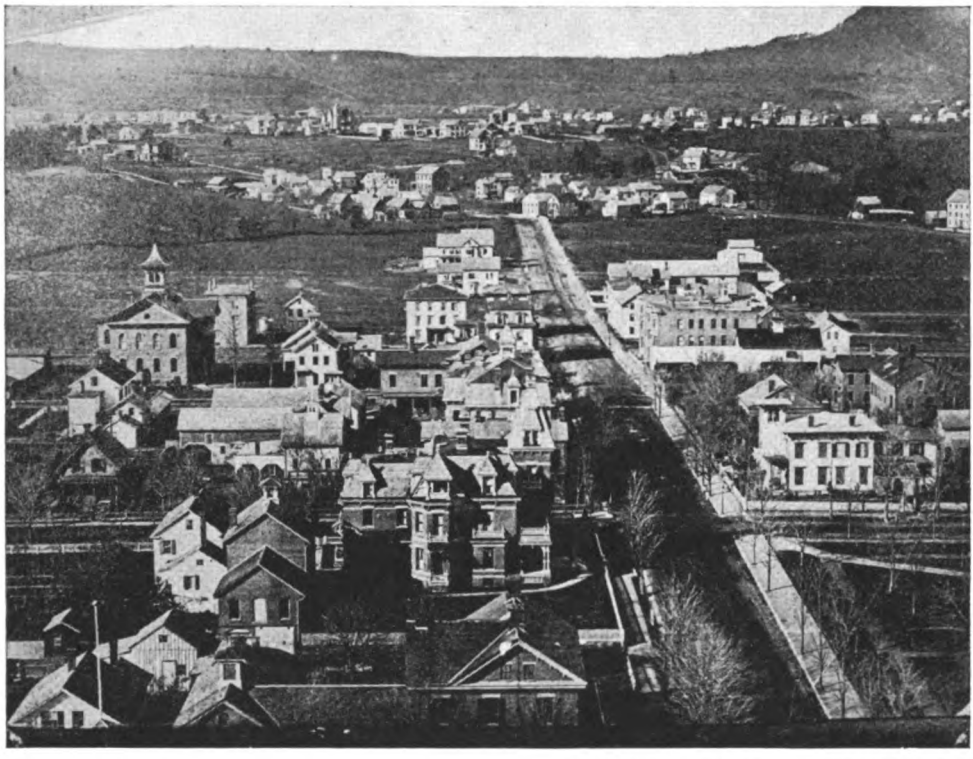
"By the time the last stage had arrived, the morning stages began to set off, and then came the ringing of the bell for their various breakfasts, and the orders for their baggage, and the directions about their trunks, &c. So it may be imagined we arose at six by no means refreshed by our night's slumbers."

Thursday, August 6th.—"Anna is so miserably to-day that we are obliged to defer leaving this place till afternoon and shall perhaps stay till to-morrow. Since breakfast Mama and I, after making Anna as comfortable as we could, and left her to repose, have been seated in the parlour conversing with two ladies who were waiting for the steam boat to set off again. Their night had been passed as uncomfortably as ours, and the woman of the house informed Mama just now that she was up all night, and made breakfast for sixty people at different times. Both the master and mistress of the tavern are very clever and obliging people, and do all in their power to make us comfortable. The steam boat has just gone, after firing half a dozen salutes, which reverberate in fine style among these hills.

"This place appears to be quite a large and flourishing town as far as we can judge, full of business and noisy enough certainly. The day is warm and delightful, and I hope we shall get off this afternoon. There is a constant succession of vehicles drawing up to the door, directly before the window where I am writing, and my aching head would rejoice to be removed to some more quiet room. I passed the morning in reading 'Gil Blas' and chatting with a variety of people who flitted in and out of the room. Mama was with Anna.

She continued the same, and after dinner, finding she grew no better, we decided to send for a Physician and stay here till she was better.

"Dr. Hall, accordingly, was sent for and soon arrived,—quite a pleasing and a very sensible man. He seemed to think that Anna had narrowly escaped a fever of a week or two in duration, and prescribed medicines of different kinds, which before evening relieved her considerably. He left her for a short time, but returned at seven



(Photo courtesy The Holyoke Public Library)

View of Holyoke Looking Up Dwight Street from the City Hall Tower, About 1873

o'clock. I took a short walk, but it was hot and dusty, so I returned soon. Saw a beautiful view of hill and dale from the end of this street. The Dr., when he returned, bro't Mrs. Hall with him, a very pretty, pleasing woman, who paid me quite a long visit. He left Anna more medicine, applications for her feet, &c., &c. We had her removed this evening to the opposite room, which is much more quiet, and really a very comfortable apartment. Mama had a small room next us, and passed a tolerable night. I had a very disturbed one, tho' better than the preceding, as only four stages came in instead of eight and a steam boat."

Friday, August 7th.—"Arose this morning with a violent headache. Anna better, but still weak and feverish. The first thing done

was to get her up and refreshed and the room put in order and aired, which was happily accomplished by eight o'clock. When the doctor arrived he saw Anna was better, recommended quiet and cooling drinks, and promised to call again. After breakfast I laid down and slept a couple of hours and rose feeling rather better and put on my blue evening gown, which was more appropriate to the state of the atmosphere than my riding habit. Anna slept soundly, and seems to get a little better every hour. We dined at two and the doctor has paid her another visit,—finds her still a little feverish and ordered suitable remedies. From present appearances we do not expect to get off tomorrow, and if that is the case we must give up going to Malta, as we have passed the four days we intended to spend with Aunt Margaret on the road. I think it most probable we shall remain here till Monday, when Anna will probably be quite recovered, and then return home by some different route. This, tho' a great disappointment, we ought to regard of no consequence in comparison with her escaping a fever of some weeks in length. We have been as well situated as possible in this house, except as to the noise. The people are exceedingly kind and very clever, and we have wanted for nothing during our abode here. After writing the above and sealing two letters which Mama wrote to Aunt Margaret and Papa advising them of our plans, I accompanied Mama in a very pleasant ride, thro' the town, and saw beautiful views of the country. Returned at nine and drank tea."

Saturday, August 8th.—"Last night, if possible exceeded the first night we were here in noise and confusion. The eight stages again flew up to the door, baggage was thrown about in all directions, people coursed about the house all night, talked and walked about the piazza, went off again at two or three o'clock. The steamboat again arrived, cannons fired, bells rang, bugle played, and at six o'clock Mama entered the room declaring she had not closed her eyes, and that she must remove from this place, or she should certainly be ill herself. For my part I passed a more comfortable night, for I was so fatigued that I slept through most of the noise and heard the rest in the indistinctness of a dream. Anna had slept but little and tho' better this morning is by no means well enough to permit us to think of setting off today. The Doctor came before seven and said that Anna would have been almost well if she had only passed a good night. Mama begged him to endeavor to procure private lodgings for us that Anna might have some chance to procure rest, and he went out accordingly, saying he had no doubt he should find some. We got Anna up and dressed, and she appears much better. Then went down to breakfast.

"The Dr. has just been here again (nine o'clock) and says he has found us a room to which we can remove this evening or afternoon—where I suppose we shall stay till Monday. Mama and Anna are at present stretched on the bed and I hope will procure some sleep. I feel quite bright and refreshed and am seated in a fine chair with 'Gil Blas' to amuse me this morning. . . .

"Among the walkers on the piazza this morning I discovered Mr. (Alvan) Fisher the painter, who was talking with great vehemence to several gentlemen around him, and from some words I caught, and from his doleful looks I gathered that his night had been as uncomfortable as ours. The sentence 'never slept a wink' and 'didn't close my eyes all night' are heard from sundry discontented voices below, which proves that we are not alone unhappy.

"He came to announce the arrival of Mrs. Hall and the two Miss Welles to call on us. Mama and I were all ready, and followed him to the room below. Mrs. Hall introduced two elderly ladies, very pleasing in their appearance and manners. They are sisters to Mr. and Mrs. Wm. Welles, and reside about a mile from this house in a retired and very pleasant situation. They came to beg us to remove Anna to their mansion, as they understood from the Dr. she could not get better in such a noisy house as this and he had been unable to procure lodgings in the house where he expected to find them. This offer was made with so much kindness, and pressed so earnestly that Mama accepted their offered rooms immediately and with much gratitude—indeed we had no alternative for, as to spending another night in this tavern, it was not to be thought of. We agreed to go to their house at five in the afternoon, and they took leave, apparently much gratified with the expectation of seeing us.

"Mama and I read till dinner time and then put up our trunks and bundles preparatory to our departure and at five o'clock took leave of Mrs. Chase and her excellent household and were politely handed by Mr. C. into our equipage. Had a very pleasant ride to Miss Welles's. Anna bore the motion of the carriage pretty well, but seemed quite feeble and wearied.

"Mr. and Mrs. Welles had been (along with a large party from this town) in the steamboat to Bellows Falls, but had not enjoyed the sail much, as the river was exceedingly low and the boat not in very good trim, so that they had to walk a great part of the way on the banks.

Monday, August 10th.—"This morning at seven o'clock Mama entered our room and said that a plan had occurred to her during the night, which she thought would enable us to fulfil our plan of visiting Aunt Margaret without infringing on our limited time. It was to leave Anna here to spend this week with the Miss Welles's and recruit her strength preparatory to her journey homewards, while Mama and I should go on to Malta, spend a couple of days with Aunt and return to Brattleboro by Sunday night, and reach home with ease of the following Saturday. After some deliberation, we determined to set off immediately, and Mama went down to apprise our kind friends of her proposed journey."

From early Monday morning till Tuesday they drove from Brattleboro to the Hudson River at Stillwater. The scenes in the first stage of the journey "verified the old song of 'Now we go up,

up, up, and now we go down, down, down'." But this was a faint "foreshadowing of what was to come",—especially on the journey back from Malta.

A long day's drive on Tuesday the eleventh through Bennington and along the Hoosack River was described with enthusiasm. "We came down to the Hudson at sunset, the river is not very wide at Stillwater, perfectly tranquil and prettily wooded. A clever lad informed us that the boat was on the other side of the river, but would come over in five minutes." The diary proceeds:

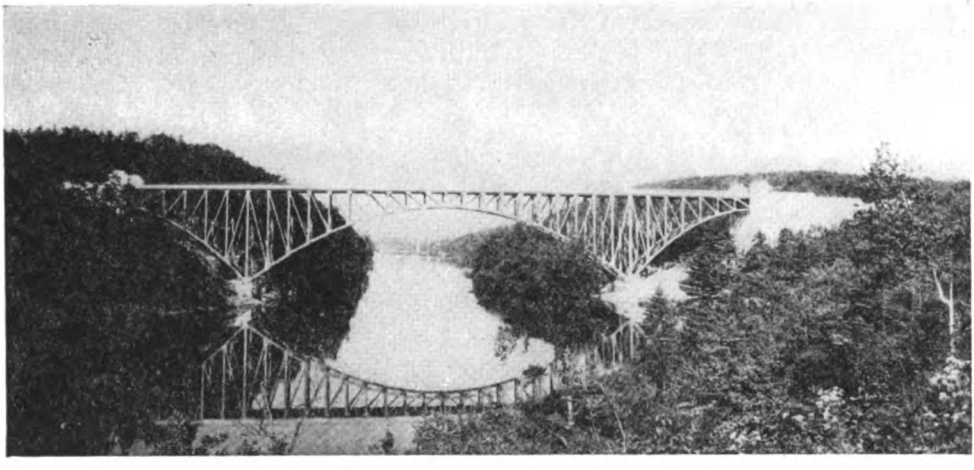
On Friday, August 14th, the visitors to Malta were called at half past five in the morning, breakfasted at six, and set forth on their journey back to Cambridge. The story of the following day began at Adams, Massachusetts, and ended, apparently, in Charlemont, at the eastern foot of that Mohawk Trail which the Indians had deserted and the motorists had not invaded. The agitating descent gave good occasion for record.

Saturday, August 15th, 1829.—"We set off on our journey by half past six, and had a delightful ride through Petersburgh and Pownal to Adams, a distance of twenty-four miles. As soon as we stopt Mama sent for Mr. Josiah Quincy Robinson, whose name appeared in large gold letters over the door of a very handsome store opposite the tavern. He came over immediately & seemed delighted to see us, begged up to go to his house & spend Sunday but we declined. He then would take no denial that we should go & dine with him, so we accepted his invitation & he gave us each an arm & conducted us to his house—quite a pretty genteel dwelling—He introduced us to his wife who seemed much dejected—having never recovered from the loss of her eldest son which took place about a year ago—

"The Widow young Mrs. Robinson lives with them as well as her three children. She is quite a pretty genteel looking young woman. Two other ladies, Miss Phillips & Miss Sunderland were seated in the room & were also introduced but they appeared to be so awe struck by our appearance as to be unable to utter a word. Mrs. Robinson carried us into the opposite parlor which commands a pretty view of the stream below. Here we conversed till dinner time, at which meal appeared young Mr. Robinson their only remaining child. He was the least pleasing of the family, appearing totally unacquainted with the ordinary forms of politeness. We had a very good tea dinner. Mr. Robinson Sen.r appeared very anxious & repeatedly said that he feared country fare would appear very plain to us & etc. but I should never desire a better meal. We staid till three o'clock, & then took leave of the ladies, with many kind wishes for a pleasant journey etc. Mrs. Robinson sent Anna a piece of cake & Mr. R. a large apple with his affectionate remembrances. The young Mrs. Robinson sent her compliments to that young lady. We had a very pleasant visit to them. I like Mr. Robinson very much. He seemed highly gratified with our visit & expressed himself under

great obligations to Mama for spending this day at his house. He accompanied us to the carriage which we met at the foot of the hill, & many a curious face peeped forth from the surrounding windows to espy who Mr. Robinson was so gallantly attending—We took a very affectionate leave, so much so that our arms ached for some miles from the warm grasp of Mr. R-s farewell.

"We then commenced our ascent of the mountain barrier which lies between this place and Charlemont, the next town. We soon alighted and walked up the whole distance. It was much steeper than any we have yet passed over, and the whole way up lay thro' the most beautiful woods, from the openings of which we had the



French-King Bridge Near Greenfield

most indescribably beautiful views I ever beheld. From one point we looked down upon the whole line of road we passed over this morning, with the several towns scattered along in different parts of the view. The town of Adams lay embosomed in trees many miles directly below us, and the windings of Deerfield River visible for a great length of way. But when we had arrived at the summit and began the descent, a view of a different character opened upon us. It was composed of the tops of mountains, seen far below us and on every side around us, veiled in a sea of mist and vapours, and presenting a scene which no imagination can conceive without beholding the reality.

"It reminded me forcibly of Miss E. Smith's description of the view from the summit of Snowden, and we really felt rewarded for all our fatigue and trouble by this magnificent prospect. And now began the worst part of the way—the descent of the mountain.

"Mr. Robinson advised Mama to get out and walk at the most dangerous parts of the road, and I was soon so alarmed that I insisted upon alighting. Mama said that she would ride a little further and then get out. So I followed on behind, Horace stopping every now and then to let me get up with them. The road was

absolutely frightful. I screamed in vain to Mama to get out. She sat still and Horace guided the horses in the most admirable manner down a winding rocky road on the edge of a deep precipice, not even a post to guard the road and the dells beneath, and the steep frowning mountain above rendered the scene terrible indeed. After flying down and down for nearly two miles, the carriage stopped in safety at the foot, and I—more dead than alive from fatigue and fright—again entered the carriage. Found Mama more agitated than I ever saw her, and on enquiring why she did not get out, she said she remained to keep up Horace's spirits, for he nearly lost his steady calmness, and if he had given up, all would have been over with the carriage. She had suffered more from terror than she had done in all we have yet gone through, and declared that nothing on earth would induce her to run such risks again. However, since the danger was over we both agreed that we were glad to have seen such sublime and unimaginable grandeur as these views presented, which I believe can never be effaced from our recollection.

"We proceeded slowly along a most picturesque road on the high bank above Deerfield River for seven or eight miles, and in my opinion parts of the way were more dangerous than even the mountain road.

"The woods were very thick almost all the way, and we travelled on till after the moon rose in clouded majesty above the mountains. Both Mama and I were exceedingly agitated by our afternoon's experiences, and when we left the narrow steep road and dark woods, and emerged to level ground and drew up to Mr. Thayer's tavern, it really seemed delightful. The feeling of danger escaped is certainly one of the pleasantest in the world, and we had bought it dearly. We found an excellent house, neat and comfortable beds, and nice tea, and retired to our repose at an early hour."

The Third Massachusetts Turnpike

In 1753, a horse-road was marked out from a point fifteen miles east of Albany through Pontoosuck to Northampton but the precipitous grades and the rough terrain offered scant invitation for its use, yet, through necessity it came to see more and more of travel. By 1764-1765 it had become of such importance that Ensign Francis Miller of the British Army Engineers surveyed and mapped the entire length, through Pittsfield, Northampton and Belchertown to Brookfield, where it linked up with the Springfield-Boston Road.

In 1797 the Third Massachusetts Turnpike company was formed to build a road approximately over this route, the layout being described as "from the east side of Robert's Hill in Northampton, to the eastward line of Pittsfield" and the following year, authority was given to continue the road westerly across the town of Hancock to the New York State line. This break across Pittsfield indicates that the town was able to finance its own highways. This turnpike was thirty-two miles in length and cost $30,000 or $940. a mile, which was $20. a mile less than the Warren-Palmer turnpike.

In 1800 the company complained to the Legislature that it had been unable to pay any dividends and asked permission to increase the tolls. Reports filed between 1801 and 1814 show that the net earnings were some $600. yearly or about two per cent on the stock. On petition of the corporation the road was made free in 1829.

The Sixth Massachusetts Turnpike was incorporated in 1799 to build a road "from the east line of Amherst, on the county road near William Breton's house, through the towns of Pelham, Greenwich, Hardwick, New Braintree, Oakham, Rutland, Holden and Worcester". With the completion of this road one might travel from Boston to Albany over the turnpikes except for the minor break at Pittsfield and a similar one through Hadley, but both of these links were traversed by ample improved roads.

Early in the day on June 18, 1818, Miss Sally Maria Stowe of Worcester, married Adolphus Fletcher, also of Worcester. Later in the forenoon, the bride accompanied her husband on the long trek to a new home in western New York State. Traveling with horses and ox-cart, almost in covered-wagon style, their journey was so retarded by their slow moving cattle that they were on the road from June eighteenth to July twenty-second, a total of five weeks.

Through Massachusetts they relied on the Third and the Sixth Massachusetts Turnpike, as related by Mrs. Fletcher in the following journal:

June 18, 1818.—"We have at length set out on our long contemplated journey. My feelings when parting with near and dear friends are more easily imagined than described. I will therefore pass over them in silence. My anxious father accompanied us as far as Holden where we were about noon. Stayed perhaps half an hour,—parted with my dear father, perhaps forever, and proceeded on our journey.

"Half past 8 o'clock at Mr. Bullard's in Oak Hill. We have traveled a pleasant road through a fine country, and though some weary now, I have spent an agreeable day. My eyes rambled at leisure over hill, dales, meadows &c, admiring the wisdom, greatness and goodness of their Creator. Stopped at Mr. King's in Rutland and took tea. They had much company,—the freemasons having assembled there. I admire the town of Rutland. Saw those ancient barracks, erected in the old war. Ten chimneys and windows on the front side—very much decayed. Passed two meeting houses and two toll gates.'

(Editor's Note,—As today, one who differentiates between the recent wars of Europe, refers to them as World War I or World War II, so in that older era, the American Revolutionary War was called the Old War and the War of 1812 the Last War. The barracks here mentioned were then over forty years old, being built for housing Hessian troops captured at Saratoga in 1777. Being hastily constructed of green lumber and never painted they were abandoned at the close of the war and shortly disintegrated.)

Friday morning, June 18, 6 o'clock.—"Had a restless night. Arose a little past two, and walked out, being unable to continue longer in bed. A beautiful morning; the full moon shown in all her splendour,—the little birds seemd to be chanting their hymn of praise to the great Creator. Felt I was very ungrateful and sinful, but rejoiced I was in my heavenly Father's hands. Thought of my dear friends at Worcester,—commended them to God. Returned into the house,—fell asleep and feel much better now. Hope to be able to travel on. Had to overhaul our large load and bind it tighter, which was considerable trouble. The people where we are, are hospitable and kind, and accommodate us very well. They appear to be wealthy farmers. May God bless them. I desire to thank Him for directing us to stop here. Our appearance excites the attention of strangers. They frequently have the curiosity to enquire where we are going, and wish us prosperity. Sometimes they observe,—'I wish I was going with you'."

Greenwich, half past 4, P. M.—"Have not enjoyed our ride so well today as yesterday, being quite indisposed. Stopped at Chamberlain's Inn, Hardwick, where I rested an hour on a bed, while the rest of our company dined. Calculate to take tea here at Mr. Cutler's inn. One of our small oxen is somewhat lame. Since we passed the furnace in Hardwick we have seen elegant buildings. There are also handsome ones here. This is a place of considerable business. Several factories and a water loom."

Ten minutes past eight, Friday evening.—"Opposite the meeting house in Enfield, at Stone's inn. Since we left Mr. Cutler's, where we took tea, we have traveled through the pleasantest place I ever saw. I mean the town of Greenwich. It is situated on an extensive plain several miles in length. The buildings are not very elegant, but the land is high, level and fertile. Two small, steep hills, covered with lofty pines, extending almost to the clouds, give an additional beauty to the scene. We gradually descended from this delightful place to a meadow. I wish my pen could do justice to the subject, but it is impossible. I can only admire and wonder. Oh that my thoughts might be suitably fixed on their great and adorable Creator.

"In Greenwich we saw two little girls called for Mrs. Harriet Newell. One was a daughter of a Mrs. Hale at whose house we stopped to drink some water. She said S. Braser, Esq. of Worcester was her uncle. I shook hands with her little Harriet, and told her I hoped she would be as good as her namesake. We traveled 16 miles yesterday and 20 today. Forever blessed be our heavenly Father for his kind protection over us thus far. We have passed this day two toll gates and two meeting houses and are now opposite the third."

Saturday morning, June 20.—"At Gilbert's Inn, Belchertown. Came about 8 miles this beautiful morning. Had a shower yesterday, which makes it more pleasant. I jumped from the waggon and had a fine walk. Being some distance forward of the load, I stopped in a graveyard till it came up, and amused myself with reading the inscriptions,—some of which were very instructive. The frequent grave

yards which we pass, reminds us of our own mortality, and I often think that I may be left in one of them and never arrive in Harmony.

"We can sew, knit, read and comb our heads very conveniently by the way. Have been reading the story of the dairyman's daughter. Oh, that I might have the same spirit of prayer for my dear parents and all others which was so conspicuous in her. Oh, may I be enabled to follow her bright example of piety."

4 o'clock P. M.—"Lovisa and I have found a pleasant, retired spot in Old Hadley where we sit down to write, while our oxen are resting in a shade at a little distance. This place is intersected with winding paths, hung with fragrant and bending flowers but is so infested with mosquitoes, I am obliged to leave it and pass on to the bridge not far distant.

"We stopped at Clark's inn, Amherst, about 10 o'clock today. Here I wrote a hasty letter to dispel the anxiety of my dear parents and left it with Mr. Ephraim C. Mower of Northampton, formerly of Worcester."

(The foregoing was copied before the loss of the original. The dates between the 20th of June and 4th of July are supplied from recollection and with the assistance of Lovisa's journal.)

6 o'clock P. M.—"Lovisa and I are near the centre of Northampton bridge across the Connecticut river,—a delightful place. We have traveled a mile across the meadows, so called, upon its banks, which extend to the north and south as far as the eye can reach. On the north side of the road this plain is covered with wheat, corn, broomcorn, flax and potatoes, and on the south with grass. The land is very valuable and cannot easily be fenced. A gate across the road, a mile from the river, prevents creatures, running at large, from destroying the labours of the industrious husbandman. From this delightful place we gradually ascended the bridge. The sun is now about half an hour high and sheds his reflecting rays on the water. With reluctance I quit this delightful place which surely says in an emphatic manner,—'God made me'."

8 o'clock Saturday Evening, at Warner's Inn, Northampton.—"We have travelled a lonely road on the banks of the river, through a dreary forest, about 3 miles, and did not come through the town."

Sabbath Morning, June 21.—"This is the Lord's Holy day. Oh, may I be enabled to spend it in such a manner as will promote his glory and my own good. I cannot worship Him in the sanctuary as I wish, but I will try to else where. I wrote considerable at this inn, so I stayed nearly all day, which did not relate to my journey.

"From several circumstances, I imagine the people at this inn are Christians. I overheard a part of a very able prayer this morning. Most of the family, which is very large, went to the meeting."

West Hampton, 7 o'clock Sabbath Evening at Mr. John Bates', a private house.—"Came about 6 miles since meeting. We found some strawberries, which I ate with milk for supper. Mr. Warner

gave us 25 tracts, which he said were left with him to distribute to those who were emigrating to the western country."

Monday morning, June 22.—"Called at Damon's Inn, where we breakfast."

11 o'clock A. M. at S. Baily's coffee house at the village in Chesterfield, which is very pleasant.—"Had to have some shoes

(Photo courtesy The Holyoke Public Library)

Holyoke — Episcopal Church, Corner of Maple and Suffolk Streets

The church faced on Suffolk Street. On this site was later built Johanis Building one story (commercial) which was torn down in 1927 to be replaced by the Hadley Falls Trust Company Building. This photo believed to have been taken between 1885 and 1890.

fastened on our oxen. Brother John Stow is in high spirits, and we are prospered beyond our expectations. We have walked considerable, this warm day, having ascended steep hills. Plenty of excellent strawberries among these mountains, which we can pick when waiting for the teams."

6 o'clock P. M. Worthington.—"Now we are at the foot of Snake Hill. We have just crossed a river on a rotten bridge, and felt fearful about venturing on it, but we were carried safely over it. This is a retired, romantic spot. I distinctly hear the roaring of the water and the screaching of a saw mill."

Tuesday morning. At Mr. Isaac French's, Peru.—"Mrs. French is a cousin and formerly an intimate acquaintance of Ma'am Fletcher. We came here last evening and expect to stay till tomorrow. As our

white faced ox is feeble, we think it imprudent to travel. I am not sorry we stay, as we shall have an opportunity to wash and bake. We wash at Mr. Daniel Goldthwait's, a brother of Mrs. French.

"Mrs. G. has been troubled with the lock jaw, which reminds me of my dear father. She is very kind and agreeable and appears to be a real Christian. She has related to me her experience and dates her conversion from childhood. I had a very interesting and agreeable conversation with her. We are now in a very elevated place, being at the height of land between the Connecticut and Hudson river. Though not a populous place, is very pleasant and contains a handsome meetinghouse."

Hinsdale, 7 o'clock, June 24th. Wednesday.—"Stopped to take breakfast. We have now parted from our kind friends, who wished us prosperity. We urged Mrs. G. to accept a small present, which she declined, observing, 'It is not my duty'."

Pittsfield, 1 o'clock P. M. at Coben's Inn, exactly opposite the dwelling of William & Willard Gay.—"They are both now married. Coming from Dalton this morning we met a man who wished to know where we were going. 'To Holland Purchase Division', said my brother. 'I have just come from Chatauque', said he. On this we stopped, and he gave us some friendly advice about the road."

4 o'clock P. M. At Cutler's Inn.—"Called to take shelter from a shower of rain. Here was a man, his wife, and 4 small children, who have come 250 miles from the west, and going 250 miles further east. They were very poor, and were carried from town to town on charity. The man was sick and unable to work. Poor woman,—in a strange land,—without money,—friends,—her husband sick, and her children crying about her. I really pitied her."

Hancock, 8 o'clock Wednesday evening.—"Stopped for the night on the summit of a mountain. Here we met a family from Chenang, and going to Mendon, Mass. I enquired for Mr. Dickenson. Mr. Taft, the gentleman, says he knows him. He has lately built a new house and is doing well. Sent a letter by them to Worcester. This is the last town in the State, about 100 miles from Worcester."

Thursday morning, June 25.—"Stopped to breakfast at Peirce's Inn, Lebanon, State of New York. From the window where I sit I have a view of the Shaker village, and their neat orchards. We have passed Lebanon Springs, celebrated for their medicinal qualities. What a contrast between my feelings and those of Mrs. A. Baily, on crossing the line into this state.

"It is very agreeable, being among these mountains, especially in the morning, when they seem to reach even above the clouds."

12 o'clock at St. John's Inn, a Dutch tavern.—"Have seen several Dutchmen. Alehouses and taverns in great abundance. Their bottled beer, which we buy for sixpence a bottle, York money, is very good."

4 o'clock P. M.—"Called at Herrick's Inn, in Schodack, to rest, it being warm. This is the place where Mr. Allen, formerly of Northboro, taught a school. We have enquired for him, but no one knows him."

Thursday Evening, June 25.—"At Whitbeck's Inn, Schodack. Stopped to spend the night.

"The various observations I made on the different and new objects which I saw in this Dutch region, will be uninteresting, and indeed I have forgotten what they were, except that the Dutch made a singular appearance."

Friday morning, June 26.—"Stopped for breakfast at Yate's Inn, another Dutch place,—indeed we find scarcely any other. Brother John is very much diverted with hearing them talk,—he has already learned some of their phrases, with which he often diverts himself. We are now within 3 miles of the City of Albany."

11 o'clock A. M. At Foot's Inn, nearly opposite the old jail, city of Albany.—"Since we came from Yates' in Greenbush, we have passed those barracks erected in the last war, not so much decayed as those in Rutland, Mass. They were painted white, and resembled a small village. We stopped on a hill at a little distance to view them. There, thought I, the name of my God and Saviour has been frequently taken in vain by wretched soldiers while perhaps some knave delighted to call on the name of the Lord and held sweet communion with him. I passed slowly and silently along reflecting on what I had seen, when, from the top of a hill which we had ascended I suddenly had a prospect of the city of Albany and the Hudson river. I descended from the waggon to enjoy the beauty of the scene. It was very calm,—not a breeze to ruffle the smooth current of the Hudson, while sloops, schooners and boats wafted pleasantly along. At length we came to the ferry,—this was more curious than all the rest. I could not have guessed what it was, fastened to a wharf upon which we drove the teams while the passengers ascended some stairs and seated themselves in the open air. The floor under our feet served for a roof to the horses and drivers while one man sat on deck to steer. After we were seated and the boat unfastened the man on deck rang a bell, which was the signal for starting. Immediately we began to move forward. We ran down to see how this could be effected and found seven horses following each other, much as they do in a cider mill, and propelled the boat by moving a large water wheel under the boat. When we came to the opposite shore the boat was fastened to the wharf and we drove into Albany. We walked along through Market street gazing round for something new. At length we saw a steam boat and went to examine her. This was a novel sight. We went down a stair case and into several elegantly furnished rooms. We stayed a considerable time to examine her which gratified us much. We then passed along through the streets to this place. The buildings here are not elegant, though some look tolerably well."

From Albany the travelers continued westerly along the route of the Erie Canal which was begun the previous year but not completed until 1825. At Buffalo they proceeded southerly for an additional sixty miles to their destination, the entire journey of some six

hundred miles occupying five weeks, covering approximately seventeen long, long miles in a long, long day.

Perusal of the journal (of which about one-third appears here) affords the answer to an oft-asked question. Today, there are scattered about the country, an innumerable quantity of taverns and inns of an earlier generation, the need for which the modern motorist cannot comprehend. In the heyday of those old hostelries, the working day was long and speed was unknown. The traveler made a sunrise start and halted for breakfast after proceeding a modest distance. A second inn provided the noontime meal, while tea was had at a third and supper at a fourth. After an evening trek, lodging was secured at a fifth. Hence, five establishments were required where two would suffice today.

The Pontoosuc Turnpike

No similar area in Massachusetts enjoyed more complete turnpike facilities than did southern Berkshire County. One long forgotten artery, known as the Pontoosuc Turnpike was designed especially to avoid such appalling grades between Pittsfield and the Connecticut Valley as were encountered by Turnpike Number Three.

During the early years of the nineteenth century, at least four definite attempts were made to provide such a road, but each effort ended in failure, due to the exceedingly rough and hilly terrain which made the cost of both construction and maintenance, excessive and difficult. About 1818 a feasible route was discovered through the "Pass of the Westfield", along Westfield River to North Becket, but the investing public had been too often misled to consider the project with much enthusiasm.

On November 19, 1828, The Springfield *Republican* printed an appeal to the public for the support of the Pontoosuc project, signed by six Springfield corporators; Joseph Merrick, Joseph Shearer, L. Pomeroy, Jonathan Allen, James Fowler and Henry Stearns. This turnpike was designed to give an easy route from Springfield to Pittsfield and did in fact subsequently come into being, unlike a good many other similar projects.

"Exploring parties of judicious and cautious men from Pittsfield, Middlefield, Chester, Westfield and Springfield" had frequently examined the proposed route on the lines of the towns of Chester, Middlefield, Washington and Becket, according to the appeal, and it was declared that it was possible to build a road in the valley of the main western branch of the Westfield River having no place a grade steeper than a degree and a half or an inclination of one hundred thirty-eight feet in the mile, compared with grades then existing on traveled roads as steep as twelve degrees.

The ease of this grade over the "Pass of the Westfield" River had been known to a few, for some years, but the public was skeptical. Also there was rivalry of the shorter but steeper Worthington Turnpike (Number Three), terminating at Northampton. Thus the

project caused considerable controversy and was finally carried through by the zeal and activity of the promoters, who had a patriotic purpose to promote the interests of Springfield, it being impossible to obtain the building of the highway by the towns as a free road. The road was completed in October, 1830, at a cost of $10,000. Its opening was made the occasion for an excursion of some twenty-five Pittsfield men to Springfield by stage coach.

It must have been a beautiful trip through an unspoiled country. The correspondent of the Pittsfield *Argus* wrote a glowing account of the scenic beauties and of the travelers' impressions of Springfield. Here is a passage that arouses the imagination:

"We were agreeably surprised, about midway in our passage, to find the log hut of an old settler. He had occupied his almost inaccessible residence for nearly thirty years. His only visible communication with the world was a narrow foot bridge terminated by a flight of stairs, made of rock and stones, leading over the precipice. For miles beyond his house, the scenery is as wild and romantic as any which the great novelist of Scotland has described in that land of mountain and song."

The Pontoosuc Turnpike gave a much more intimate connection between Springfield and Pittsfield than had hitherto existed.

The route which this corporation was authorized to follow began at Pittsfield and proceeded through the towns of Hinsdale, Middlefield, Washington and Chester, passing through Middlefield on the northerly branch of the Westfield River and keeping close to that stream in Chester, to "the road leading from Albany to Westfield (the present-day Knox Trail) at a point near the tavern house of Colonel Henry", which was at the mouth of Walker Brook, on the westerly bank of the Westfield River. Hence, it is apparent that the southerly terminus of the Pontoosuc was directly across the river from where the Chester Station of the Boston and Albany Railroad now is.

The road was completed in 1830, but barely three years later the Boston & Albany railroad was born. Without prior experience with turnpike building, through the mountains, it is doubtful if mere man would have had either the imagination or the courage to attempt to pilot the iron horse through such a forbidding wilderness. Where the narrow valley afforded insufficient space for both the dirt road and the railway, the latter won the position and the turnpike passed out of the picture.

Today's traveler on the Boston & Albany closely follows the line of the Pontoosuc for many miles. Near Chester he looks across the river to where the old highway can still be seen; now but a sandy country road. It closely parallels the railroad until the valley narrows to a point that makes it too restricted for both to exist. At the boundary separating Chester from Middlefield, where the steep slope of Gobble Mountain drops sheer into the river, the road

fades away, though traces may still be seen, now on one side, and again on the other, all the way to North Becket.

The Tenth Massachusetts Turnpike

By authority granted by the State of Connecticut in 1798, a road known as the Talcott Mountain Turnpike was built, extending from the west line of Hartford, through New Hartford to the Massachusetts line at Sandisfield. There it joined with the Tenth Massachusetts Turnpike to become a link of the system connecting Albany and Hartford. The Tenth Massachusetts began at the termination of the Talcott Mountain Turnpike at the point where the Farmington River crossed the state line and continued up the valley of that river through Sandisfield, Tolland, Otis and Becket to the east side of Greenwater Pond, thence through Lee, Lenox, Richmond and Hancock to the New York State line.

The length of the turnpike was about thirty-six miles and the construction cost was $1,340 per mile. By 1854 complaints regarding the poor condition of the road led to its abandonment and it was laid out as a public highway in 1855.

In 1819 Prof. Benjamin Silliman of Yale University journeyed over this route while on a pleasure trip to Montreal accompanied by a friend Daniel Wadsworth, who made sketches of interesting scenes encountered on the way. An abridgement of Prof. Silliman's journal follows:

"On the twenty-first day of September, 1819 we left Hartford for Albany. The fine turnpike upon which we commenced our journey was but a few years since a most rugged, uncomfortable road. Now we passed it with ease and rapidity. Passing through a part of Canton we arrived in a cluster of houses, handsomely situated on the Farmington River. This was a part of New Hartford where we dined pleasantly. In the afternoon, during a ride of sixteen miles, which brought us to Sandisfield in Massachusetts, we never left the banks of the Farmington River, which, owing to its windings, and our own, we crossed during the day, no fewer than seven times, and on as many bridges. We had now left Albany turnpike, and the great thoroughfare of population and of business, and purposely deviated into one of those wildernesses, which, intersected by roads, and sprinkled with solitary houses, afford the traveller an interesting variety, and easily transport him back in imagination, to the time when the whole of this vast empire was a trackless forest. In a very hilly and almost mountainous region, we found a delightful road, so level, that our horses hardly ever broke their trot; the road generally followed the river, and was laid out with few exceptions, on the alluvial bottom, which the river had formed. We passed almost the whole distance, through a vast defile in the forest, which every where hung around us in gloomy grandeur. This tract of country had the stillness of a rural scene, imbosomed in mountains;

there were no villages, and the few scattered farm houses were scarcely near enough, even for a rural neighborhood. Their very graves were solitary; little family cemeteries several times occurred, marked with white marble monuments and by graves covered with the richest verdure, while the gloomy bier stood, hard by in the field ready again to support its melancholy burden.

"It was quite dark before we arrived at Sandisfield, thirty-six miles from Hartford, but our road was good and the welcome light

Peace Party House, Pittsfield

of the inn at length caught our eyes, and a quiet evening passed with our pens and books, beguiled our time till the hour of repose. A tolerable house was made comfortable by the assiduity and kindness of its tenants and our sleep, in a great vacant ball room, was not much interrupted by the rain dropping on the floor and by the winds howling through broken panes of glass. (This would seem to be the inn still standing in the New Boston section of Sandisfield,—Editor.)

"We set forward before eight in the morning, in the midst of a driving rain, but as the coachman was wrapped in a weather proof great coat of oiled silk and we were completely protected from the rain, we pursued our journey without the slightest inconvenience.

"For ten miles we again followed the course of the Farmington river; our road was one continuous vista, through an uninterrupted wilderness of the most lofty trees. We crossed the river again and

again till we numbered the ninth time, and then, a few miles from the confines of Lenox, we traced it to its source, a lake of probably half a mile or more in length. Soon after passing this lake, the country began to descend; another lake of greater magnitude occurred on our left,—a river soon succeeded and we recognized these waters as the first of those which began to feed the infant Housatonick.

"Lenox, the capital of Berkshire county, is a town of uncommon beauty. It is built upon a high hill, on two streets, intersecting each other nearly at right angles. It is composed of handsome houses, which, with the exception of a few brick, are painted a brilliant white. It is ornamented with two neat houses of public worship, one of which is large and handsome and stands upon a hill higher than the town and a little removed from it. It has a jail, a woolen manufactory, a furnace for hollow ware, an academy of considerable size and a court house of brick, in a fine style of architecture; fronted with pillars and furnished with convenient offices and a spacious court room, which is carpeted and what is more important, contains a library for the use of the bar. Lenox is one of the handsomest of our inland towns, and even in the view of an European traveller (who had eyes to see anything beautiful in what is unlike Europe) it would appear like a gem among the mountains. There are probably about seventy houses, stores and shops. Its population is one thousand three hundred and ten. White marble is often the material of their steps, foundations and pavements. Our dinner and treatment at the inn were such as a reasonable traveller would have been very well satisfied with at a country tavern in England. Still, probably no small town in England is so beautiful as Lenox, nor have the Europeans in general, any adequate idea of the beauty of the New England villages.

"As we ascended a mountainous ridge, two miles on the road to New Lebanon, a fine retrospect occurred. Immediately below was a spacious and deep basin environed by mountains, which, receding one behind another, presented in one view, brilliant forest green, in another, dark hues, almost black, and farther off, ridges and summits struggling through clouds and mist and rain in obscure and gloomy grandeur. Beautifully contrasted with these, was the bright cluster of Buildings in Lenox, compact, blended by perspective into one rich group in which turrets and Gothic pinnacles and Grecian columns were conspicuous, decorating the declivity of the hill, now sunk by comparison, to one of moderate elevation. The lofty Saddle mountain, with its double summit,—the highest mountain in this region, appeared at a distance on our right,—on our left, the fertile vales of Richmond, a scattered agricultural town, and almost before we were aware of it, we wound our way down the steep declivity of the mountain which bounds the southeast side of the vale of New Lebanon. We had already passed upon our right, a small village belonging to the people called Shakers, or Shaking Quakers. We did not deviate into this first settlement, because their principal establish-

ment, in this quarter was immediately before us, and we were indeed not fully clear of the mountain, before we found ourselves in the midst of their singular community."

After leaving New Lebanon, the travelers proceeded to Albany, continuing on to Montreal and Quebec, and returning via the Connecticut Valley. Their account of the trip across Massachusetts reads as follows:

"October 21st.—We left Brattleborough in the morning and eleven miles below, crossed the bridge into Northfield, in Massachusetts. Northfield is a neat village, on a wide street situated on a hill, but the houses are plain. The place had, however, an air of comfort and snugness."

"Passing down into Montague, we came to extensive ranges of primitive rocks which continued to the upper lock of Miller's Falls. The scenery at this place is handsome, and at the confluence of Miller's River with the Connecticut, the latter forms a great bow, and looks like a lake surrounded by high hills."

"Several miles below, we came to Miller's Falls. The river runs nearly north-west and is precipitated over the strata, which at this place cross the river and form a natural dam. In the middle of the river, the rocks rise so high that they form an island and the torrent is therefore divided, as at Niagara. Through the whole width, which is one thousand two hundred feet, there is an artificial dam of timber built upon the natural dam. The fall thus becomes thirty feet and is very beautiful in its kind. It is in fact a vast mill-dam and is said to be a very good miniature of Niagara. The whole scene is a fine one, and was so different from either of the other falls that we had seen that it was an agreeable addition. The object of damming these falls is to feed, with water, the canal which is cut around them, and to render the current for three miles above, less rapid. The canal is two miles long and we rode its bank to its junction with the Connecticut."

"We crossed the Connecticut again at the place where, by completing its great bend it returns to its usual direction of north and south, and arrived at the town of Greenfield, which stands two miles from Connecticut river, on a high plain, which declines gently to the west. It has handsome churches, a court house, a jail &c."

"Just at evening we drove over to Deerfield, a distance of three miles, through the most luxuriant and beautiful country that we had any where seen in our whole journey. This country is the fine alluvial region, intersected by the Deerfield river and probably formed by it, as the alluvial countries on rivers generally appear to be. Even now, in the latter part of October, the grass is most vividly green, thickly matted and rich as the shag of velvet. The remains of the crops of corn, evidenced also great productiveness."

"We were comfortably lodged in a good inn, just in time to visit, before dark, a very interesting antiquity in this town."

"Deerfield, being for a long course of years, a frontier town, was very often attacked by the French and Indians from Canada, and its inhabitants were frequently slain or carried into captivity. To guard against these attacks, an extensive fort was established, including within its limits, many of the houses and forming a place of retreat and of security for the inhabitants. In February, 1704, this fort was suprised and taken, just before daylight, and the inhabitants were aroused from their slumbers by the furious attacks of cruel enemies upon their defenceless dwellings. Most of the houses were burnt and their tenants were either dragged away into captivity or slaughtered in their own habitations, or near them. Men, women and children were indiscriminately slain and parents saw their little ones butchered before their eyes. One house still remains as a painful memento to posterity. The front door was hacked and hewn with hatchets until the savages had cut a hole through it, through which they fired into the house. This door still bears its ancient wounds and the hole, closed only by a board tacked on within, remains now as the savages left it and is a most interesting monument. Through the windows they also fired, and one bullet killed the female head of the family, sitting up in bed, and the mark of that bullet, as well as of four others, is visible in the room. In one of the holes in a joist, another bullet remains to this day. The family was all killed or carried into captivity."

"In the same attack, the clergyman of the place, the Rev. John Williams and his family shared a similar fate. Two of the children were killed at the door; Mrs. Williams, their mother in the meadows a little way out of town, and Mr. Williams and the rest of the family were carried prisoners to Canada. We saw in the museum in Deerfield Academy the pistol which he snapped at the Indians when they rushed into his bed room. Mr. Williams lived many years after his return and I saw his grave and that of his murdered wife. The house of public worship in which Mr. Williams used to preach is still standing in Deerfield."

"Deerfield is a plain venerable town with good buildings but not many of them are in the modern style; this circumstance is however, rather pleasing than otherwise. The town extends about a mile on one street. It has a highly respectable academy, the finest meadows in New England and a very ancient history."

"We left Deerfield on a fine morning and extended our ride thirty-eight miles to Springfield. We rode down to the fery at Sunderland to obtain a good view of Sugar Loaf Mountain. We crossed through Hatfield, over to Hadley and thence into Northampton, where we dined. It is hardly necessary to say any thing of these scenes which are so luxuriant and so well known that their beauty is quite proverbial. Hatfield and Hadley are neat and venerable places and Northampton is one of the finest inland towns in America. The great bends of the river here; the bold scenery of Mount Tom and Mount Holyoke and the rich and grand landscape from their summits,

particularly from the latter, have been often described and can hardly be exaggerated."

"At West Springfield we called on the venerable Dr. Lathrop, now almost eighty-eight years old. His sight is almost extinct but his other faculties appear unimpaired. He is erect and vigorous, walks well and his features are not injured. His head is covered with fine white locks and his whole appearance is very interesting. He is recently relieved from public duty by a colleague and after about sixty years of the most useful labors as a preacher is well entitled to rest."

"October 23. We passed the last night at Springfield which in beauty hardly yields to any town on the river. I visited the United States armory and was much gratified; for order, neatness and high excellence in every department, under the able management of Colonel Lee it merits the highest eulogium."

"We proceeded through Longmeadow to Enfield and through Windsor to Hartford, arriving there before evening, almost five weeks from the time of our departure. In travelling nearly twelve hundred miles, not one disaster nor one serious disappointment had given us occasion to regret the undertaking."

"I have said little of the public houses and accommodations on the journey. Should this be thought a deficiency, it is easily supplied, for we found them, almost without exception, so comfortable, quiet and agreeable, that we had neither occasion nor inclination to find fault. Great civility and a disposition to please their guests were generally conspicuous at the inns. Almost everywhere, when we wished it, we found a private parlour and a separate table and rarely did we hear any profane or coarse language or observe any rude or boisterous deportment."

The foregoing observations were recorded at the time when turnpikes were nearing the height of their popularity, but a new era was in the offing and the shriek of the locomotive whistle was soon to echo through the hills of Western Massachusetts. At Springfield, Thomas Blanchard continued to operate his steam carriage on the town street and revealed plans for building a larger one which was to be of five or six horse-power. The idea was creating considerable interest and on November 21, 1826, the Springfield *Republican* commented,—"The utility of the invention, particularly in its adaptation to railways can only be alluded to. It obviates the only serious objection to the introduction of railways into this country,—the immense expense of the steam engine as used in England."

But, alas, highway conditions were not such as to encourage the use of the automobile for another seventy-five years.

The anti-railroad clique protested that if a turnpike could not be maintained on the prevailing schedule of tolls, then most certainly a far more costly steel railroad could never be successfully financed and operated.

In the meantime, while the turnpike corporations came into existence, ran their course and ceased to be, another equally enthusiastic and vociferous group of propagandists brought forward strong arguments in favor of canal construction, both barge canals and canals for overcoming handicaps of such obstructions as rapids and falls encountered in otherwise navigable waterways.

Canals

Advocates of canals as a substitute for roads in the transportation of freight were much in evidence toward the close of the eighteenth century. Timothy Dwight, president of Yale College contended that "a canal between Barnstable Bay and Buzzard's Bay would be most advantageous to Massachusetts and the whole continent". More than a century later such a water-way came into being as the Cape Cod Canal. Another scheme was for proving communication by water between Boston and some part of the Connecticut River, for which purpose Gen. Henry Knox and others were incorporated by the General Court, in 1792 as the "Proprietors of the Massachusetts Canal".

From the very beginning of things; from the days when the Dutch first explored the Connecticut River in 1614, men stuggled to overcome the barrier to navigation presented by the rapids and rocky shoals at Windsor, Connecticut. The most effective instrument was, in the humor of the period, known as a "white ash breeze", being a long, strong, wooden pole, called a "setting pole", with which canoes and scows could be pushed and coddled and propelled up stream. It was a tiresome and time-consuming task, so much so that freight designed for Springfield was commonly put ashore at Pynchon's Depot at Warehouse Point and teamed to the settlement. For this purpose, a cart road was in 1651 established from Springfield through Longmeadow "to the warehouse at the foot of the falls". However, all this was of little value to the upriver towns, for similar but even more adverse conditions were encountered at South Hadley as well as at Montague. It was contended that, if canals were created to by-pass those objectionable conditions, they would provide adequate and inexpensive transportation for merchandise as well as permit the floating of huge rafts of timber down from New Hampshire and Vermont. During the decade following the Peace of Paris, concluding the American Revolutionary War, provision was made for constructing such canals.

The following account of "the locks and canals on Connecticut river" was preserved by an "ingenious, respectable and obliging person who visited them in the autumn of 1801." His observations are of particular interest as the Lower Canal was the earliest navigation canal in America.

"In February 1792, a law was passed by the Legislature of Massachusetts, incorporating the Hon. John Worthington, Esq. and others, for the purpose of rendering Connecticut river passable for

boats and rafts from the mouth of Chickapee river, northward, throughout the Commonwealth. But at the request of the proprietors, a subsequent law was passed in 1794, for the purpose of dividing the property of the company into two separate corporations; the one called the Upper Canals, was to improve the navigation of the river between the mouth of Deerfield river and the head of Miller's falls; The other, called the Lower Canals, was to improve the navigation of the river between the head of the falls at South-Hadley, and the mouth of Chickapee river.

Description of the Upper Canals

"These works are intended to overcome the falls and rapids which obstruct the navigation at Miller's river, commonly called Miller's falls, and the rapids at Montague, called the Great Bar, or the Montague falls. About two or three hundred rods below the mouth of Miller's river, a dam laid up of solid timber, and planked over, of about eight feet high, and 330 feet long, is built across Connecticut river; this raises the water sufficiently in the river, to overcome and deaden the rapids at, and above, the mouth of Miller's river for a mile and upward. On the east side of the river, between the bank and a solid rock on which the dam is butted, is a lock of one hundred feet in length, and twenty feet wide, to let through the boats and rafts, and overcome the eight feet fall occasioned by the dam. Four miles below is another dam of a stupendous structure! It is one thousand feet in length, and twenty-eight feet high, from the top, to the surface of the water; it is built like that at Miller's river, of solid timber, and supported by heavy cross timbers, and is situated at the place formerly called the Great Bar, where two large rocks in the channel of the river serve, the one to support it, and the other to connect the two parts of it together. This dam answers two purposes. 1. It sets up the water to the upper dam at Miller's river, by which means it overcomes and deadens the rapids between Miller's falls and the Great Bar, and enables the boats to proceed that distance without interruption. 2. It supplies with water the canal which serves to overcome the rapids at Montague. This canal is nearly three miles in length, and is cut across a level piece of land, formed by the river, which here makes a large bend; the water is taken out of the river at the dam, and empties into it again a few rods below the mouth of Deerfield river. At the head of the canal, and immediately at the dam between the eastern bank of the river, and a solid rock to which the dam is joined, is the guard lock, supported on the river side by a stupendous wall of stone, and on the other side by a rocky shore; this wall is forty feet high, and twenty-six feet broad at its base. Here the boats and rafts are let in, and proceed through the canal, and through eight locks, three of which are nearly half way down, and are called the Middle Locks, and five at the bottom of the canal, where the boats take the river again. The canal is twenty feet wide, and two and a half feet deep; at different intervals are waste-gates

to let out the surplus of water into the river. The locks are also twenty feet wide, and seventy-five feet long, and draw three feet of water; they are supported on each side by stone walls well cemented, and eight feet thick, lined inside with pine planks, which are spiked to timbers fastened in the walls. The whole of the fall from the guard lock at the dam, to where the boats take the river again, is sixty-six feet. The construction of these works saves the carriage of six miles. The toll as fixed by law is,

Lenox in 1839

	Cts.	mls.
"For one ton of merchandize,	91	7
one thousand feet of boards,	41	7
other lumber equal to 1000 feet of boards,	41	7
empty boats for every ton which they are able to carry,	16	6

"The first toll was received on the 30th of October, 1800, and the locks are now in full operation.

"The new established turnpike road, leading from Williamstown in Berkshire, to Boston, crosses the lower end of the canal, and is connected by a bridge with stone piers, which is now building across Connecticut river, a few rods above the mouth of Deerfield river.

Description of the Lower Canals

"These works are intended to overcome the falls and rapids which obstruct the navigation, between the mouth of Stony Brook, and the mouth of Chickapee river. At the head of the falls, at South-Hadley, a dam of solid timber is built obliquely up the river, on the east side, for the distance of about one hundred rods; from thence it strikes across to the west bank of the river, which is a distance of about

sixty rods. The oblique part of the dam is from 14 to 12 feet high, lessening in height gradually as it extends up the river. At the bottom of this dam is the guard lock which leads into the canal. The canal is two miles in length, and dug chiefly along the bank, at a small distance from the river. The first mile is dug through low land diked up on the river side, leaving a narrow strip of pasture between the canal and the river, and forming a number of natural basons in the former, which variegate the prospect, and render this part of the canal extremely pleasant; the remainder of the distance is dug through solid rocks, in some places to the depth of twenty and twenty-five feet. The canal in the most narrow places is twenty feet wide; but generally it is much wider, and two and a half feet deep. At the bottom of this canal are a pair of gates which lead into a large bason, at the end of which is another pair of gates, letting in at pleasure the water into another reservoir leading directly to the great car or machine, which conducts the boats and rafts up and down the inclined plane. This inclined plane is a substitute for a chain of locks, which would be requisite to ascend and descend the fifty-five feet which the canal is here elevated above the surface of the river. At the foot of the inclined plane is another canal of about half a mile in length, where the boats are discharged from the car, and which empties into the river again. Here is one lock which is used occasionally to keep a constant supply of water in the canal, when the water in the river is very low. The inclined plane is built of solid stone, thirty feet wide, and two hundred and seventy-five feet long from the level of the Upper Canal, to the bottom of the Lower Canal, where the car sinks to take on, and discharge the boats. The car is built somewhat in the form of a waggon, with three pair of wheels. It is constructed in such a manner, that when ascending or descending the inclined plane, the top part, where the boats or rafts are received, remains always level, the hind wheels being the largest, and the fore wheels the smallest in diameter. It is fifty feet long and twenty wide, and supposed to weigh ten tons. To each end of a swing tree, is fastened a large chain which winds round the shafts of two spur wheels of twenty feet diameter; these wheels are turned by a large trundle wheel fixed on each end of the shaft of a water wheel of sixteen feet diameter; and this water wheel is put in motion by water which is supplied by a small reservoir. The machinery is constructed in such a manner, that every pound of water acting upon the water wheel, draws twenty-four pounds of weight upon the car, and twenty tons weight can be raised on the car without difficulty. When the car is sunk in the Lower Canal, at the foot of the inclined plane, the boat is floated on, the water wheel is then put in motion, and the car is drawn up on the inclined plane, by means of the chains fastened to the swing tree, and winding round the shafts of the spur wheels. As the car is mounting it discharges all the water it contained, by means of apertures made for the purpose, and leaves the boat dry, resting on the top. When it is wound up to a level with the Upper

Canal, the flaps on the back part, and on each side are hoisted, the apertures shut up, and the water let in by means of opening the gates of the bason; this sets the boat afloat, which is then discharged into the bason, and from thence into the canal. The operation of floating on a boat in the Lower Canal, drawing it up, and discharging it again in the upper bason, requires about fifteen minutes time, of which about six minutes are employed in the act of drawing it up.

"About a mile below the inclined plane, are the Willimanset Falls, round which a canal has likewise been constructed, by means of a dam of round sticks of timber, thrown up parallel with the east bank of the river, at the distance of about twenty feet; the vacancies between the sticks of timber, which are braced and secured by cross sticks, are filled up with stones, and the inside planked against the water. This canal is about a mile in length, and at the bottom of it are two locks, constructed of square timber, braced across, and stones thrown in to fill up the vacancies. The fall from the head of the canal, to the bottom of the lower lock, is sixteen feet, and it takes about five minutes to pass through each lock.

"The construction of the Lower Canals saves also the distance of six miles land carriage. The toll as fixed by law is,

	Cts.
"For one ton of merchandize,	75
one thousand feet of boards,	75
all other timber, in the same proportion,	
empty boats for every ton weight which they are able to carry,	16

"The machine or car has been in operation ever since the 16th of April, 1795. But the erection of the dam at South-Hadley, having set up the water in the river, so as to overflow some meadows in the neighbourhood of the towns of Hadley and Northampton, and leave a number of ponds of stagnant water, which it is supposed have had the effect to produce the fever and ague, and other disorders, the complaints of the sufferers in those towns, have obliged the company to take away the dam, which has been effected this fall, and which must stop the operation of the works. But it is to be hoped that the legislature will not suffer an object of such magnitude, and of such extensive use to the community at large, to be abandoned; but by granting timely relief, enable the company to prosecute their plans, by devising means to supply the canal with water, with the aid of machinery, independent of the erection of a dam.

"The salmon and shad fishery has of late become a great object in the vicinity of the Lower Canals. The people living in that neighbourhood have built as many as fourteen wharves in the river, at the foot of the South-Hadley Falls, where they fish about three weeks in the month of May. They draw up their nets against those wharves, and catch sometimes as many as twelve hundred fish at one haul, which, it is said, will fill twenty barrels. It is also said that the owners

of one of these wharves caught fish in one season, to an amount which, after deducting all the expenses, cleared them the sum of four thousand eight hundred dollars!

"Both the Upper and Lower Canals are calculated for the passage of boats of sixty feet long, from eight to nine feet wide, drawing twenty-two inches of water, and carrying from ten to fifteen tons of merchandise. The rafts which come down Connecticut river, contain sometimes three hundred thousand feet of boards and upward; but they are composed of several parts or divisions, which are fastened together and loosened as occasion requires; each part of division is called a box, which contains from five to eight thousand feet of boards; is from fifty to sixty feet long, and from twelve to thirteen feet wide, and is let through the locks separately. Both boats and rafts are generally navigated by two, or at most three men, though the boatmen hire additional assistance, when, in going with boats up the river, they come to swift water, and are heavy loaded.

"The stock of both companies is divided into 504 shares each, of which about one-half belongs to a company of gentlemen in Holland. The corporation of the Upper Canals has expended 100,201 dollars, 26 cents. and that of the Lower canals 81,375 dollars, exclusive of the toll received".

Timothy Dwight, president of Yale College, visited the Lower Canal at various times and observed that:

"About five or six miles above Chicopee we visited South Hadley Canal; made within a few years to convey boats, rafts, &c. round the Falls of South-Hadley. These Falls commence about twelve miles north of Springfield, and terminate within somewhat less than ten. Before this canal was finished, the boats were unloaded at the head of the Falls; and the merchandize embarked again in other boats at the foot. The removal of this inconvenience was contemplated many years since; but was never seriously undertaken until the year 1792; when a company was formed under the name of the Proprietors of the locks and canals in Connecticut River, and their capital distributed into five hundred and four shares. After the proper surveys had been made by Christopher Collis, Esq. of New-York, the business was placed under the direction of Major Benjamin Prescott of Northampton. A dam was built at the head of the falls, following, in an irregular and oblique course, the bed of rocks across the river. The whole height of the dam was eleven feet; and its elevation above the surface, at the common height of the stream, four. Its length was two hundred rods. Just above the dam the canal commences, defended by a strong guard-lock; and extends down the river two miles and a quarter. At the lower end of the Canal was erected an inclined plane, fifty-three feet in height, and two hundred and thirty in length: built of stone, obtained in the neighbourhood. The face of the plane was elevated 13½°; and was covered with strong plank. The outlet of the canal was secured by a sufficient lock, of the common construction.

When boats were to be conveyed down the intended plane, they passed through the lower lock; and were received immediately through folding doors into a carriage, which admitted a sufficient quantity of water from the canal to float the boat. As soon as the boat was fairly within the carriage, the lock and the folding-doors were closed; and the water suffered to run out of the carriage through sluices, made for that purpose. The carriage was then let slowly down the inclined plane on three sets of wheels; the second and third sets being so much larger than the first, as to keep the carriage exactly level.

"The machinery, by which the carriage was raised or lowered, consisted of a water-wheel, sixteen feet in diameter, on each side of the inclined plane; on the axis of which was wound a strong iron chain, formed, like that of a watch, and fastened to the carriage. When the carriage was to be let down, a gate was opened at the bottom of the canal; and the water, passing through a sluice, turned these wheels, and thus slowly unwinding the chain, suffered the carriage to proceed to the foot of the plane by its own weight. When the carriage was to be drawn up, this process was reversed. The motion was perfectly regular, easy, and free from danger. At the foot of the inclined plane, another canal is formed round a small rift; and through this, boats make their entrance again into the river. The boats, which pass this canal, are from fifty to sixty-five feet in length, and carry from ten to twenty-five tons. Upwards of seven thousand tons of merchandize have passed through this canal in a season. The fare is five shillings a ton.

"A continual series of misfortunes has attended these works from their commencement. Before the dam was finished, a considerable part of it was carried away by the stream, and the contractor was unable to rebuild it, or to make up the loss. The canal, which was made at very great expense, being cut nearly two miles through a bed of stone, and for more than half a mile to the depth of from sixteen to thirty feet, through a stratum of rocks, too hard to be easily dug, and too loose to be blown, was found to be of insufficient depth. At first, cables were employed to raise, and let down the boats; and were found insufficient, as well as expensive. The chains, which were substituted for them, were frequently broken; and thus embarrassed the regular course of the navigation. Very disagreeable apprehensions, also, have been excited for the shad and salmon fisheries in the river; probably not without foundation.

"A still greater misfortune than all these has arisen from another source. The dam raised the water, for ten miles above, about four feet higher than its common level. In consequence of this fact, the freshets flowed back much farther than before; and left large quantities of stagnant water, when they withdrew. At Northampton particularly, one of the healthiest towns in New-England, the inhabitants, for several years after the erection of the dam, were extremely afflicted with the fever and ague; a disease, which, except for two years in consequence of an enlargement of a mill-pond, and in the neighbour-

hood of that pond, was unknown in this town, for more than sixty years. Bilious remittent, and other autumnal fevers, increased also to an alarming degree.

"Agitated by these disastrous events, several of the inhabitants instituted suits against the proprietors of these works, under the law concerning nuisances. During the trial of one of these suits, the dam was declared to have been erected illegally. The proprietors were, therefore, liable to an endless train of prosecutions, of the same nature.

"In this situation, the proprietors applied to the Legislature for relief; and obtained the grant of a lottery in their favour; which yielded them a considerable sum. In consequence of this assistance, they deepened the canal to such a degree, that it is filled without the aid of the dam. The inclined plane, also, they have given up. Locks at the lower end of the canal have been substituted; and the works have been leased to Mr. Ariel Cooley, the person, who by his native ingenuity, alone has been the source of these improvements.

"The importance of this canal to the country above may be learned from the following statement. The works, according to the conditions of the lease made to Mr. Cooley, produced in five years the following sums:

In 1810	$12,817.76
1811	12,724.78
1812	9,945.87
1813	12,405.75
1814	8,768.56

"It will be remembered that restrictions and war harassed the commerce of this country during the whole of this period.

"The largest, and most successful, fishery, which exists on this river, is carried on at the foot of these falls.

"A cataract is of course a romantic and delightful object; particularly in a great river. This spot in uncommonly interesting and beautiful. Above the fall the river steers a Southern course for a considerable distance, and then below, it turns directly to the East. After wandering over another handsome reach, it turns again to the South. A spectator standing about a quarter of a mile below the fall, sees on the Eastern bank a pretty assemblage of meadows, pastures, and farm-houses, and on the Western similar grounds, interspersed with scattered trees, and small coppices. A grove of pines, farther Northward on the same shore, lends its gloom to vary the landscape. On the Eastern shore, also, he is presented with the singular prospect of these works, consisting of the inclined plane, and a number of buildings, connected with it, consisting of a saw-mill, forge, &c. together with a handsome house, erected for the superintendant. In the river itself, and on the shores, numerous wharves, boats, fishermen, and spectators, amounting to several hundreds in the month of May; the time, at which I have most frequently visited this place; together with the ascent and descent of the carriage, loaded with its freight,

and full of people, impress on the mind very sprightly ideas of bustle and business. The cataract descends over a rift of rocks, thirty feet in height, and about one hundred rods in length, down which the water is thrown into all the fine forms of fantastical beauty, excessive force, and wild majesty; and at its foot presents a noble limit to the prospect below: while a rude succession of hills, with a few solitary spots of cultivated ground, opening on their declivities, and beyond them the Peak of Mount Tom, ascending in blue, misty grandeur, terminate the view above."

The inclined plane which was a vital unit of the South Hadley canal was one of the many inventions of the noted Robert Fulton, designer of the *Clermont*, the first practical steamboat. For this canal improvement he received a patent from the British government in 1794. In 1795, when receiving an engineering degree, he presented an elaborate thesis on canals of that type.

Ariel Cooley, the engineer who discarded Fulton's system, and replaced it with the conventional locks of the era, was a descendent of Benjamin Cooley, one of the early settlers of Springfield. Some of Benjamin Cooley's sons settled in the Skipmuck section of Chicopee and there lived Ariel Cooley in a large salt-box house, across the road from the present club house of the Oxford Country Club and which was destroyed by fire some sixty years ago. From Ariel Cooley's time there have been engineers in every generation of the Cooley family, and the late Mortimer E. Cooley, historian of the clan was at the time of his recent death, dean emeritus of the School of Engineering at the University of Michigan, Ann Arbor.

Under ideal conditions, the shoals at Windsor, Connecticut, were nothing more than could have been successfully coped with by a crew of experienced rivermen, as is evidenced by various contemporary accounts. Under the caption, "Equal to Steam Navigation", the Springfield *Republican* reported in December, 1828, that "Messrs Bardwell, Smith & Company cleared from the South Hadley canal December 1, with two boats loaded with wool and merchandise, discharging their loading in Hartford and arrived at South Hadley canal December 2, one in 28 hours and the other in 32 hours". If the physical conditions making such a exploit possible could have been relied on as of common occurrence, the place of the river in commercial circles would have been assured. Unfortunately, however, December days in New England seldom afforded like conditions, and such occasional voyages served but to renew and strengthen the faith of the stout-hearted industrialist, who would not be denied.

In 1824 a group of capable and astute Hartford men organized a corporation known as The Connecticut River Company for the purpose of "improving the boat navigation of the Connecticut River from Hartford toward its sources". Negotiations were initiated toward acquiring ownership of all the dams and canals on the river above and plans were made for the building at Enfield of a canal of the most modern and efficient type. A committee appointed to carry out these plans reported that the canal properties of the river could be bought for $368,000 but that vital improvements and extensions would increase that sum to at least $1,500,000.

Then came the steamboat to the Connecticut, as if in answer to a prayer.

Steamboats

In 1807 Robert Fulton, designer of the first practical steamboat, drove his *Clermont* up the Hudson to Albany at a speed of five miles an hour and by 1825, numerous steam vessels were operating regularly between New York and Hartford and giving complete satisfaction. The power of the steamboats and the speed attained by them were strong points in their favor. The directors of the Connecticut River Company reported that "the velocity of the *Oliver Ellsworth* exceeds eight miles an hour" unassisted by wind or tide and it was "the general opinion that steamboats would soon supersede sloops in transporting freight between New York and Hartford". An optimistic opinion was received "from an engineer unsurpassed in point of skill, experience and reputation, in the whole United States;—"I have studied your plan for steam tow-boats and am confirmed in its success on your river and its adaptation to many other of our rivers in the United States, in preference to inland canals".

After exhaustive study, the Connecticut River Company decided "that a steamboat adapted to the navigation of the river above Hartford should be forthwith built". From time to time thereafter, favorable reports were received regarding the vessel under construction and at a meeting held on October 5, 1826, the directors voted "that the steamboat now building in New York for the Connecticut River Company, be called the *Barnet*".

It was expected that the appearance upon the upper river, of a craft so novel and strange; so powerful and capable of transporting large quantities of merchandise would arouse great interest and create support in favor of the organization promoting the enterprise. The anticipation was more than realized; the appearance of the marvelous vessels, in a region where no boats save small sloops and flat-boats had ever been seen, created intense enthusiasm and the *Barnet* was everywhere effusively welcomed.

It was reported in the Hartford *Courant* of October 9, 1826, "that the steamboat *Barnet*, designed for the navigation of the Connecticut River above this place was launched at New York on the 2nd inst. Her engine is in a state of forwardness and it is expected she

will be ready for operation in the course of a few weeks". The *Barnet* reached Hartford the middle of November, being towed from New York and on November seventeenth proceeded up the river under her own steam. So late was the season, it was expected the river might be closed by ice any day, yet an immediate demonstration was considered so important that it was deemed advisable to risk the weather and have the steamer seen by the people up the river without delay.

In after years a local citizen recalled the excitement caused by the appearance of the little vessel in the river at Windsor Locks. He was a young man at the time, and his enthusiasm, with that of many others, was expressed with volleys from thir guns by way of salute, the noise of which, however, could hardly drown the roar of the steamer's exhaust. One man paced her along the bank, and it was deemed remarkable that the craft could make its way, as fast as a man could walk.

The boat made several attempts to ascend the falls but each time was swept back, and was unsuccessful even with the assistance of a number of fallsmen with poles. She accomplished only about half the distance, and temporarily abandoned the endeavor, reluctantly returning to Hartford.

The Northampton *Gazette* thus noticed the incident:

"The steamboat built at New York named the *Barnet* going from Hartford to Northampton, was called 'an electioneering trick.' The people were waiting at Springfield but the boat stuck at Enfield Falls. They used flat boats and poles to get her over, but the passengers got out and made their way to Warehouse Point and home as best they could."

However, on November twenty-eighth, a second attempt was successful. A scow manned by experienced rivermen was lashed to either side of the boat, and with the combined efforts of these with their setting poles, and her own steam, she surmounted the obstacle and triumphantly steamed up the river to Springfield.

The excitement created throughout that city as the *Barnet* approached was extraordinary. Everybody left his work and flocked to the shore. Business for the time was at a standstill. The court was in session, but the court-room was speedily vacated by all save the judge and the sheriff.

The Springfield *Republican* announced the occurrence in a hasty item in the next day's issue:

"The steamboat arrived. We have only time to mention that the steamboat *Barnet* arrived at Springfield yesterday about 4.00 o'clock and was greeted by our citizens with every demonstration of gladness. The President of the Connecticut Company and two or three other gentlemen were passengers. We understand it is the intention to navigate the boat farther up the river."

On December sixth it continued:

"We heard of the passage of the *Barnet* as far as Greenfield. At Greenfield and Northampton also we understand she was met with a welcome reception. The passage of the boat up the river has not only silenced the opponents of the project but has seemed to satisfy even the most doubting, of the practicability of navigating the river by steam. If so much can be accomplished in the present state of the river, what may we not expect when the contemplated improvements take place."

A few days later appears this review of the event, from the pen of Samuel Bowles himself:

"The *Barnet* moved majestically through the waters. The scene was inexpressibly grand. It can be compared to nothing we have ever witnessed. The boat was greeted with a most enthusiastic demonstration of gladness. Great multitudes of people assembled and the ringing of bells and the firing of national salutes, added to the sublimity of the scene. Even at Deerfield and Northampton where is a deep interest in favor of the canals, which is a rival project, a most liberal and hospitable feeling was displayed towards this most welcome stranger."

The Hartford *Courant* mentioned editorially that:

"The steamboat *Barnet* recently built in New York for the navigation of Connecticut River above this place, which arrived here on the 15th ult. started on Monday of last week on a trip up the River. She had previously made an unsuccessful attempt to pass Enfield Falls and returned to Hartford; and this circumstance has called forth a vast deal of wit and good feeling from some of our neighbors."

And the Connecticut *Mirror* recorded later:

"She has now passed the Falls without difficulty and reached Springfield in very good season. She arrived there at 4 o'clock on Tuesday last, and received with true and neighborly kindness. The citizens were gratified with an excursion on the River;—She must have been at Northampton on Friday morning.—The boat answers every expectation of those who have been industriously employed in the subject of River Navigation."

The *Courant* on December eleventh again noted:

"The friends to an improved navigation of the Connecticut River cannot fail to be highly gratified with the result of the late experiment with the Steam-Boat *Barnet;* and when it is recalled that three locks at Enfield, with the six already at South Hadley, will afford uninterrupted steamboat navigation from Hartford to Northampton and far beyond, while the number of locks in the Farmington Canal

between Northampton and New Haven is not less than 61, some of those who have possibly invested more money in the canal than the Editor of the *Herald* (New Haven) may be disposed to think there is no great cause for exultation in the little excursion of the *Barnet.*"

The *Barnet* was an experiment and a challenge. The little vessel was but seventy-five feet long, and fourteen and a half feet beam, and without load drew but twenty-two inches of water. It was the first steamboat that had ever appeared on the river above Hartford, and the first craft of its kind ever seen by most of the inhabitants.

Her maiden voyage attracted wide attention. The Boston *Daily Advertiser* of December eleventh thus refers to her performance:

"The first experiment at navigating the Connecticut River by steam, and the progress of the boat, was watched with intense interest. At Springfield it was welcomed with enthusiasm. When the intelligence arrived that the boat was in sight every man rushed to the landing. The streets were left solitary. At Northampton a thousand people were assembled, many of whom before had never seen a steamboat. A salute was fired and a continued shout raised in honor of the enterprise, successfully accomplished; what but a week before had been called an impossibility. It ought not to be forgotten that this experiment was made under almost every disadvantage.

"The *Barnet* was built entirely since the 22nd of August last, and no opportunity given of initiating the improvements in the structure of boats on the western river for navigating shoal waters."

"Yet success has followed the exertion, and we see nothing to limit our hope that those who live on the banks of the Connecticut, may soon be favored with all the advantages which come from the cheap, safe, regular and quick communication afforded by steam navigation."

Running up the Deerfield River to Cheapside, she was delayed several days by ice.

A steamboat was regarded as a prodigy by the inland people, who gathered from miles around to behold the spectacle.

As she approached Bellows Falls, her appearance, rounding the bend of the river below the village, was proclaimed by the pealing of the bell of the Immanuel Church, and a salute of fifty guns from a large cannon stationed on the village green. After Captain Strong had exhibited the power and speed of the wonderful craft to the crowd assembled on the banks, he ran her into the lower lock of the canal for the night.

A committee of the townspeople had been chosen to welcome the navigators, who were received with a complimentary address, to which President Alfred Smith responded, saying:

"No reasonable doubt remains that judicious and not difficult improvements of the river, will extend and secure the invaluable

benefits of steamboat navigation, to nearly the whole population of this valley."

Later in the day a notable banquet was tendered to the passengers on the vessel, in honor of the event. This was held in the large dining hall of the Mansion House, which had been recently erected. Every available seat was filled, many remaining outside in order to hear the speeches.

(Photo courtesy The Holyoke Public Library)

Holyoke — Old Cemetery on Northampton Street, 1881

Later removed to Forestdale.

Those at the table included the Officers of the "Association for Improving the Connecticut River," also the two captains, together with many of the leading citizens of Bellows Falls and nearby towns, some even from other states. It was the largest representative gathering that had ever been seen in the vicinity, and was considered a most important occasion. It was termed an "elegant dinner," and was followed by a long list of toasts, many of which were significant, and these were punctuated by the thunder of a cannon outside.

The first offered was:

"The *Barnet:*—Which scatters inducement to industry as she passes our farms; we bid her welcome with all our hearts."

This was followed by:

"Connecticut River:—Destined yet to be the patroness of enterprise, and to bear upon her bosom the golden fleece of industry."

"The enterprising, energetic and persevering inhabitants of Hartford:—We have long been their friends, we shall soon be their neighbors. Three Cheers!"

"Our Mother Connecticut:—Her children are glad to see a visitor from home."

"New England Enterprise:—With an engine rightly constructed and judiciously managed, high pressure is safe."

After the regular toasts were announced the president of the day gave the following:

"The President of the Connecticut River Company:—His indefatigable exertions for improving the navigation of our river are worthy of more than present praise, and we hope the history of Connecticut River Valley will name him with honor in future times. We beg leave that he will accept our thanks, and at the same time do us the honor to present the assurance of our hearty co-operation to the company over which he presides."

The president of the Connecticut River Company, Mr. Smith, replied, and at the close of his remarks, offered this sentiment:

"The citizens of New Hampshire and Vermont:—Enterprising, liberal and intelligent, may they be prospered accordingly."

Volunteer toasts then followed:

"Connecticut River:—The grand highway from Canada to the seaboard. Give us Steam!"

"Vermont, New Hampshire, Massachusetts and Connecticut:—May they all be united in the improvement of Connecticut River."

"Connecticut, Vermont and New Hampshire:—The first the projector, and the two last the co-adjutors of a noble enterprise. To the tune of 'When Shall We Three Meet Again'."

"The speedy execution of the proposed improvement of Connecticut River:—We assume its accomplishment as certain. May the wealth which it shall diffuse be so universal, as to reach the pocket even of those who ridicule the measure as visionary, and oppose it as impracticable."

"The valley of the Connecticut:—Needs no canal while the river runs."

"The arrival of the Steamboat *Barnet:*—May it be the means of converting many of our respectable citizens to the cause of the improvement of the Connecticut River, and serve as a lesson to mankind, that they ought not, even in the hour of affliction and persecution, despair of better days."

The cannon was used at frequent intervals during the remainder of the day. Fireworks were discharged in the evening, and the whole village was given up to such a jubilation as it never before experienced. Some of the references in the above toasts may be explained in the following account of the struggles and opposition to the enterprise, an account of which appeared in *The Bellows Falls Intelligencer* of the following Monday:

"The arrival of the *Barnet* at this place is an event which will form an interesting epoch in the history of the Connecticut River, and is only a small item in the list of improvements calculated to be carried into execution at some future period. It is known to most of our readers that the cause of improving the Connecticut River by dams and slack water, has met with a decided opposition from the inhabitants of some of the towns in Connecticut and Massachusetts. The gentlemen who first conceived the plan of navigating the river by the means of steam power have been ridiculed, and the whole scheme laughed at as visionary. We never doubted its practicability, and we have now the fullest assurance that the plan is not only practicable but will speedily be carried into effect. The gentlemen who compose the association to improve the river are entitled to the warmest thanks of the public, for their indefatigable zeal and perseverance in the cause they have undertaken; and we doubt not but they will see their most sanguine expectations carried into effect."

The next morning President Smith of the Hartford Association, tendered to a large number of ladies and gentlemen of Bellows Falls a short excursion on the river, a pleasure often recalled by them in later years.

The size of the *Barnet* having been found too great for the dimensions of the locks, the boat left at eleven o'clock on the fourteenth upon its return trip, with a parting salute of one hundred and twenty-four discharges of the old cannon bidding good-bye. Two hundred people accompanied her as far down the river as Westminster. She was at Brattleboro, Thursday night, and reached Hartford the following Tuesday. Much more time was used than necessary upon both the up and down trips, because of the celebrations at the different points, and the many proffered entertainments, most of which were refused fearing the closing of the river by ice.

On the return to Hartford of the *Barnet,* the friends of the Connecticut River Company held a meeting of felicitation, and celebrated the successful voyage by a wonderful supper at Morgan's Coffee House, which was attended by many prominent citizens, including a number of guests from Springfield and other towns above Hartford. The practicability of steam navigation on the upper Connecticut and the advantages of speed and power in a natural waterway, over horse-drawn boats in an artifical channel, had been triumphantly demonstrated.

It was felt that the efforts of the company had been rewarded by unqualified success.

A vote appears on the company's records at about this time, "requesting and empowering Messrs. Daniel Buck and Henry Kilbourn, to hire or purchase, and cause to be properly fitted up, a boat to be towed by the steamboat *Barnet* up Connecticut River."

The little steamer had made history and justified her creation. She had served her day and generation, and, after a few unimportant trips made later, she disappeared.

Her achievements are here recited at length, because of their significance at this stage of events. The results of this trial trip, its success or failure, were momentous as they related to the plans of the River Company. Her career was watched with greatest anxiety by the river advocates, and with jealous interest by the canal faction; thus the opinions of the press were of consequence.

The days of both the turnpikes and the steamboats were picturesque, though impractical. Lumbering stage coaches could not cope with the grades of the steep mountain roads nor the snow drifts and high waters of the valleys. From Saybrook, at the mouth of the Connecticut, well up toward Canada, those ancient mariners fought a losing war with the shoals and floods. At one time, steamboat competition was so keen that passengers were transported between Springfield and Hartford for twelve and one-half cents and at their journey's end were sent home in a carriage. But dreams of fortune shortly dimmed as rumors spread that the iron horse was about to be loosed in the land.

Early Railroads

On December 27, 1841, through rail service between Boston and Albany was established over the Boston & Worcester and the Western railroads. These two pioneer railroads combined in 1867 to form the Boston and Albany, now an operating division of the New York Central system.

The Boston & Albany was thus one of the first railroads constructed in the United States during the era of empire building and development of the West. It actually preceded by ten years the completion of the Hudson River railroad between New York City and Albany.

The original road in the Boston & Albany combination was the Boston & Worcester, chartered June 23, 1831, and opened for seven miles to Newton on April 16, 1834. Service began with two trains daily from Boston to Newton and return.

The road was opened to Ashland on September 20, 1834; to Westboro on November 15, 1834; and to Worcester on July 4, 1835. A newspaper account of that period read:

"The Boston & Worcester railroad is now brought so near its completion that the cars have commenced running regularly for the

accommodation of the public. On Saturday the 4th, four engines with trains of cars each carrying in the whole 1,500 passengers ran over the road four times."

The Western Railroad from Worcester to Albany was incorporated March 15, 1833. The company was organized January 4, 1836, and construction was begun in the midwinter of 1836-37 in the township of Charlton, near the crossing of the Worcester and Hartford Turnpike.

(Photo courtesy The Holyoke Public Library)

Holyoke — Connecticut River Railroad Company Station on the Hill

Left: Rufus Mosher House. Right: A. A. Waitt House about 1884.

From the beginning the road was graded for double track, demonstrating the faith of its promoters in heavy traffic to come. Through Brookfield the line was extended to Springfield, and the first trains ran between Worcester and Springfield October 1, 1839, two daily in each direction.

Construction west of Springfield was delayed by competition between Stockbridge and Pittsfield for the fixing of the route through their towns. After surveys, Pittsfield won.

Once this route had been chosen, the Western Railroad engineers began construction on the most difficult section of railroad yet attempted in this country. To extend the line over the Berkshires meant not only heavy grades and sharp curves, but many bridges and deep cuttings. This work was accomplished during the summers of 1840 and 1841.

Meanwhile two rival roads set out to meet the Western Railroad at West Stockbridge. The first to make the junction was the Hudson & Berkshire, which laid a light and inexpensive track with steep grades. The section of this line from Hudson to Chatham is still in use as a branch of the Boston & Albany.

The Albany & West Stockbridge reached Chatham several months later and the track of the Hudson & Berkshire was used from Chatham to West Stockbridge when service was first opened. One year later the Albany & West Stockbridge laid better track for this link.

Chief engineer of the Western Railroad was George W. Whistler, a West Point graduate who later built the St. Petersburg & Moscow Railroad. Major Whistler was father of James A. McNeill Whistler, the distinguished painter and etcher.

The first trains from Boston to Albany left daily at 7 A. M. and 3 P. M. The morning train reached Albany at 6:30 P. M. Passengers on the afternoon train stopped overnight in Springfield, resuming their journey the next morning. The same schedules applied for the 7 A. M. and 1 P. M. trains from Albany to Boston.

Through freight trains between Boston and Albany began running January 1, 1842.

The consolidation in 1867 of the Western and Boston & Worcester railroads into the Boston & Albany Railroad was but the natural result of the march of progress. Indeed, the consolidation has been considered for years before it was actually consummated. It was a success from the start, far greater than anticipated.

The next step in progress and extension of service came in 1900 when the Boston & Albany was leased by the New York Central and thus became an integral part of the system. Today its equipment ranks with the best in the nation and its roadbed has been standard for years.

Americans were ever prone to obey the urge to "go and look behind the ranges", and the comparative comfort and safety offered by the railroads greatly increased the number of tourists on pleasure bent. To add interest in pleasure travel, guidebooks were brought out which the naive compilers assumed provided further allure. One such was Bradbury & Guilds *Railroad-Chart, Boston to Albany, 1847*, which the publisher asserted "constituted a novel and complete companion for the railway carriage." It was claimed that "the great object of the work was to increase the pleasures of travelers, by directing attention to the great variety of natural and artificial objects with which our railroads are skirted. Although intended more especially for travelers, it is presumed that all who feel the slightest interest in the great steam thoroughfares which are nearly or quite constructed in different parts of the country, will find in its pages much knowledge of the peculiarities, cost and construction of the Western Railroad."

After a description of the Boston & Worcester Railroad, the author continued:

"At Worcester the Western Rail begins. We have now done with easy grades and level country, and in their place must meet inclinations of forty to eighty feet per mile,—inclinations, in descending which, no steam is used, though a speed of thirty miles an hour, with the 'brakes on,' is obtained by the force of gravity alone. Soon after leaving Worcester station, an extended prospect appears upon the south side of the line. The valley of the Blackstone River is somewhat below, with the Providence and Norwich railroads stretching off in the distance. Upon the hillside, beautifully situated, stands the College of the Holy Cross, a Catholic institution, founded by Bishop Fenwick, and designed for the education of young men for an ecclesiastical or professional course of life. A farm of sixty acres is attached to the College.

"At 46½ miles the ascent to Charlton Summit, ten miles distant, commences. The grades vary from 25 to 49 feet to the mile. Here, also, is the village of New Worcester, on the north, situated upon Blackstone River, where there is considerable water power. A little further on, the road crosses Kettle Brook, on a very pretty stone viaduct, thirty feet above the water. The mileposts above Worcester are of stone, and placed upon the south side of the line.

"One of the greatest difficulties in constructing the Western Railroad, was to pass the high ridge of land between the valleys of Blackstone and Chicopee Rivers. The greatest depression was found to be in Charlton, and this was 452 feet above Worcester station. The declivity of the country on both sides of the summit, in the proper direction, being too great to attempt to cross directly from one valley to the other, it became necessary to deviate from a direct course, and to conform, in a great degree, to the direction of the mountain ridges. This deviation will be better understood when we consider that from New Worcester to the East Brookfield Station, the distance in a direct line is less than eleven miles, while by the railroad it is seventeen, showing a loss of six miles.

"The line, as we have stated, passes along the side of a mountain spur known as Henshaw Ridge. The difficulties overcome will appear at almost every mile, both above and below Clappville, which is the next stopping place. This is a busy, pleasant, and very romantic little village, situated in the extreme south part of the town of Leicester. There are several woolen factories in various parts of the town, two of which are at Clappville, and an establishment for manufacturing mousline de laine also at C. Machine card manufacturing is carried on extensively here. French River furnishes a fine and constant water power. Four miles above this station we arrive at Charlton Summit, the highest point attained between Worcester and Springfield. Here we pass the most extensive rock excavation which occurs between those two places, being at the deepest part 42 feet. The angle at the summit is easily felt as it is passed, there being an immediate change from a rise of 49 feet per mile to a fall of 31 feet.

"Charlton Station, a few rods west of the summit, is on the north side of the town of that name, about three miles from the center

village. From this station a branch railroad is to be constructed to Southbridge, a distance of ten miles. West of this station, on the south, in clear weather, there is an extensive and interesting prospect. The country appears rugged and broken, though much of the land is cultivated; and the traveller may realize, from the numerous hilltops in view, that we are now on high land. The accelerated speed of the train, in descending this plane of 50 feet per mile, soon brings us to Spencer. Just before arriving at this station, and soon after leaving it, the village, about two miles distant, can be distinctly seen on the north, and makes a fine appearance. This town is elevated, and the surface is rough and uneven, but the soil is very fertile. Two miles further is East Brookfield. Here the heavy descending grade ceases, and in the next nine miles the track does not vary fifteen feet from a dead level.

"This is a thriving village, of recent growth, and has some water power. It is situated upon the easterly part of the beautiful valley of Chicopee River, which has its rise at Quaboag Pond, two miles to the south. This pond is two miles in circumference. In many places the green meadow is spread quite down to the margin of the water; in others, the shore is very abrupt and rocky, and covered with tall forest trees.

"Scarcely anything in nature can exceed the beauty of this whole valley in the summer season. The Chicopee River, which in the first eight miles of its course falls but four feet, winds lazily along through the meadows, its glassy surface reflecting the rough images of the range of well wooded hills which shut in the valley on the south, and forms a picture worthy of the painter's art.

"Brookfield, one-half a mile from the center village is the next station; and three miles further brings us to West Brookfield, the half-way station between Worcester and Springfield. The village is half a mile north of the station. During the year 1675 this village was assaulted by a large body of Indians. The inhabitants collected into one house, which they fortified as well as they could. The Indians, after burning about twenty other buildings, attacked this house. The inhabitants, however, defended themselves with desperate bravery for three days, when, finding all other means ineffectual, the Indians loaded a cart with flax, straw, and other combustibles, set fire to it, and by the aid of long poles fastened together, endeavored to thrust the burning mass against the building. Providentially, a shower of rain fell at that moment and defeated their object, and before the attempt could be renewed, Major Willard arrived from Lancaster with assistance, and the savages were put to flight.

"The railroad here crosses Chicopee River, and continues on through a somewhat uneven meadow, to Warren. This romantic and very pretty village is situated upon both sides of Chicopee River, but a short distance north of the railroad. The ground is very uneven, and there is a beautiful view of the whole extent of this place as we pass along. The river here furnishes an extensive water power, and

there are several important manufactories in the neighborhood. The Quaboag Seminary, in this village, stands on a slight eminence overlooking the river and village.

"At Warren we commence another descending plane, five miles in length, varying from 26 to 43 feet per mile. The Chicopee River, also, which, it will be remembered, falls but four feet in the eight miles past, now commences dropping rapidly, and in the next five miles falls 212 feet; in the next eleven miles the fall is 290 feet. The line follows close to the river the whole distance to Palmer, eleven miles, and the scenery is wild and romantic. The hills, on both sides, shut down close to the bed of the river, which is crossed by the railroad at almost every bend. Directly opposite the 76th milepost, on the north bank of the river, stands, a relic of years gone by, an old mill. Surrounded by a dense forest, its ragged appearance and venerable form unconsciously carry the mind of the traveller back to another century; and the thought will arise, that like that old mill, at some distant period, the rugged, fire-fed horse, which now goes thundering daily by, freighted with busy life, will also "pass away;" and the ruins, it may be more complete than these, be gazed and wondered at by generations to come.

"In passing down this plane, the hills upon both sides gradually become more precipitous and rugged, a thick forest lines the road, and for several miles, hardly a vestige of civilization is visible. After passing Brimfield, which is a watering station merely, about midway between Warren and Palmer, where very few of the passenger trains stop, we begin to see occasional intervales which bear evidence of cultivation. The country back from the river, however, continues rough and broken.

"Palmer, our next stopping place, is an important village. It is situated about two miles from the center of the town, and has grown up almost entirely since the opening of the Western Railroad. Palmer was originally settled by emigrants from Ireland, many of whose descendants remain in the place. The town is crossed by the Chicopee, Ware, and Swift Rivers, and has an extensive water power. There are several flourishing villages within a few miles of the station, where are manufactured, annually, large quantities of cotton and woolen goods, machinery, scythes, iron castings, cars, &c. They are all heavy establishments, and the business is rapidly increasing.

"A few rods below Palmer, the Chicopee River crosses the line, and bends away to the north, to its junction with the Ware and Swift Rivers, at the village of Three Rivers; while the railroad continues on in a direct course across the peninsula thus formed, rising about sixty feet to reach a slight summit. At the 88th mile, the line crosses over Twelve Mile River, on a very high embankment. On the south lies the valley of the river, visible for several miles among the mountains; on the north, considerably below the line in the distance, the Chicopee River, having made its circuit, returns to the south; and, at the point of Wilbraham Mountain, now near at

hand, it is again close to the line. It was at this spot where the Chicopee River is nearest, and "below the line," that Marcus Lyon, of Woodstock, Connecticut, was murdered, in 1805, by two Irishmen.

"Young Lyon was on horseback, in the road, returning to his home, when the assassins shot him with a pistol, pulled him from his horse, and with a huge club mangled his head in a shocking manner. They afterwards rifled his pockets, turned his horse into a pasture, and dragged the dead body to the river, where they sank it

View of Greenfield Looking West From Poet Seat

with flat stones. The murderers, whose names were Daley and Halligan, were afterwards arrested, tried and executed at Northampton.

"At North Willbraham Station, passengers for the Wesleyan Academy leave the train. This is an institution of high reputation. It has considerable funds, and about two hundred and fifty scholars attend throughout the year. Soon after leaving this station the summits of Mount Holyoke, and Mt. Tom can be seen on the north. These mountains are about twenty miles distant, Holyoke being upon the east, and Mt. Tom on the west, side of Connecticut River. In clear weather, their tops can be frequently seen, in passing from the 90th to 95th mile.

"Willbraham, the next station, is in the extreme northwest corner of the town. The village of Jenksville, in Ludlow, is only one mile distant. At Indian Orchard, half a mile beyond Jenksville, is a large and very valuable water power. A company has been formed to improve it, and a stone dam built across the entire river. It will doubtless become in a few years a thriving manufacturing place. A

ride of four miles over an uninteresting level country, brings us to the beginning of a descending plane of sixty feet per mile, and nearly three miles in length, which terminates at Springfield. As the cars stop here about three quarters of an hour, the traveller has ample time to dine.

"Springfield is in every respect the most important place upon this route. It is situated upon the eastern bank of Connecticut River, nearly midway between Boston and Albany. It has a railroad upon the north, up the valley of the Connecticut to Northampton and Greenfield; on the east, one to Boston; on the south, one to Hartford and New Haven; and on the west, one to Albany; all of which center at one station, in the north part of the village. The business part of the town in on Main Street, which is nearly three miles in length, very spacious and contains many elegant buildings. The street runs parallel with the river, and on the east the land rises with a gradual slope; on which, overlooking the town and river, are many handsome private dwellings. The United States Armory, the largest and most important of the kind in the Union, stands on high ground, about half a mile east from Main Street. The buildings are of brick, neatly arranged around a square. From the cupola of one of them there is a delightful view of the surrounding country. From twelve to fifteen thousand muskets are annually manufactured here; and one hundred and fifty thousand are stored in the arsenals connected with the establishment.

"The town of Springfield has an immense water power, and cotton goods, paper, iron castings, brass cannon, machinery, &c., are manufactured to a great extent in various parts of the town. Population in 1845, 14,703.

"At Springfield, the Western Railroad company have erected numerous large freight and car houses, a large machine shop, a circular engine house, besides other necessary buildings; the whole covering several acres of ground. The bridge over the Connecticut River is a fine piece of work. It is constructed of truss frame, for one track only, 1,264 feet long, of seven spans 180 feet each. The flooring is thirty feet above the water, and is covered with tin. The piers, of which there are six, are of hewn granite, laid in hydraulic cement, and of great strength; deemed sufficient to resist the pressure of the ice and current in the greatest freshets. This bridge cost $131,612.

"After crossing the Connecticut, we commence by a gradual ascent, moderate for the first twelve miles, the rise to Washington Summit,—the highest point of land passed by the cars. Passing West Springfield, the road lays through a fine intervale, upon the north bank of Westfield River. Here may be seen some of the finest farms of which this State can boast. At the 104th mile, there is a very deep ledge of hard rock, cut through for the passage of the cars. This ledge, at the highest point, is 55 feet above the track. Vestiges of

the rude huts once inhabited by workmen upon this road, are now occasionally seen skirting the track.

"*Westfield.* This town is beautifully situated in a basin, about four miles in diameter, surrounded by high hills. The principal village is about half a mile south from the station. It is a handsome place, and fast increasing in wealth and population.

"The Hampshire and Hampden Canal passes through the town, and crosses the railroad a few rods west of the station. This canal extends from New Haven, Connecticut, to Northampton, Massachusetts, is 78 miles in length, and cost $600,000. This was once considered good property, but the introduction of railroads has been a fatal blow to it, and it is now almost valueless.

"At 109 miles the line crosses over Moose Meadow brook, a stream of considerable size, and continues on through the meadows; the hills, however, gradually closing in. At the 111th milepost the light grade ends, and we enter upon the heavy grades up the rugged and uneven mountain's side. For the next 27 miles there is no grade less than 25 feet to the mile, the rise in that distance being 1,270 feet. Here the mountains shut in on both sides of the river, and the line continues on the north bank, along the precipitous side of Tekoa Mountain, where there is scarcely room for a road to be built. Higher up, the canal feeder winds round the rocky side of the hill. Just before arriving at Russell, the road crosses the river, for the first time, on a rude bridge; underneath which, the stream in tumbling over its rocky bed, forms a very romantic fall. Russell Station is in the north part of the town, between two high mountains which approach very near each other; Shatterack Mountain upon the north, and Tuttle Mountain on the south side of the river. There are very few buildings in the vicinity; and the whole appearance of the place is in the highest degree wild and picturesque. It is, indeed, a charming spot; and to those who would, for a few days, leave the hot walls and the din of city life behind, and wander alone, among the wild woods and giant mountains of the country, as God made them, this place, above all others upon the line, is preferable.

"At Tuttle Bend Bridge, a short distance west of this station, the road re-crosses the river, and continues up the northern bank as at first. About two miles above Russell, there is a beautiful fall of the Westfield River, in full view of the cars on the south side, as we pass along. The rocky points project in all directions, and the water from above, as it tumbles along, is whitened with foam, and makes an interesting appearance. On the opposite side are several mills, finely located. At the 119th mile, the line crosses over the north branch of the Westfield River, and from thence to the summit continues up the west branch, crossing it, in a distance of seventeen miles, twenty-four times.

"Chester Village, the next station, is a flourishing manufacturing place, surrounded by hills, and directly upon the railroad. It is in the extreme southeastern part of the town, some of the buildings

being in Blandford. The line now again crosses the river, and continues for several miles, at a rise of 35 feet per mile, along the base of the Blandford Mountains, which close down quite to the river, and which are very steep and heavily wooded. On the north bank, also, a chain of hills, nearly as formidable, close the river in a narrow channel. If the traveller can catch a glimpse of Roaring Brook, which comes tumbling down the mountain side, nearly perpendicular for several hundred feet, on the south side of the track, near the 122d mile, he will be able to judge of the precipitous character of these hills. Before arriving at next station, however, they recede somewhat from the stream, and the country again appears more open. Chester Factories is another thriving village, directly upon the road. It is the halfway station between Springfield and Pittsfield. As it is also at the bottom of the heavy mountain section grades, a stop of several minutes is required to prepare for the ascent. Like all other small villages upon the line of the Western Railroad, Chester Factories has rapidly increased in wealth and business since its completion. There is a large amount of water power at almost any point in this vicinity.

"Leaving this station, we pass along through a narrow meadow for a mile and half; and at 127½ miles, through a deep rock cutting, and immediately over a stone arched bridge, sixty feet above the river, we enter the mountain section. No language that we are master of could give the traveller any proper description of the wildness, the grandeur, or the obstacles surmounted in the construction of this portion of the route. The river is exceedingly crooked, and the lofty mountains, which are very steep and rugged, and of solid rock, shut down quite to the river on both sides, their sharp points shooting by each other, rendering crossings at every bend of the stream indispensable. In addition to this, the points of the hills must be cut away, and for many miles these rock cuttings and bridges follow each other in regular and rapid succession. The grade here is 80 feet per mile, and, although the track is sixty feet above the river at the bottom, yet, so rapidly does the water fall, that at McElwain's Mills, about five miles distant, the grade is but 2½ feet above the mill dam. Nor does the passing traveller, hurtling along rapidly as he is, see much of the beauty of this mountain gorge. It is not until he has seen, from the base of these mighty structures of art, the passage of the cars, that their magnificence is really felt."

Miss Sedgwick thus happily describes the passage up the valley of this river:

"After leaving the wide meadows of the Connecticut, basking in their rich inheritance of alluvial soil, and unimpeded sunshine, you wind through the narrow valleys of the Westfield River, with masses of mountains before you, and woodland heights crowding in upon you, so that at every puff of the engine the passage visibly contracts. The Alpine character of the river strikes you. The huge stones in its wide channel, which have been torn up and rolled down

by the sweeping torrents of spring and autumn, lie bared and whitening in the summer's sun. You cross and recross it, as in its deviations it leaves space on one side or the other for a practicable road.

"At Chester Factories, you begin your ascent of eighty feet in a mile, for thirteen miles. The stream between you and the precipitous hillside, cramped into its rocky bed, is one of the tributaries of the Westfield River. As you trace this stream to its mountain-home, it dashes along beside you with the recklessness of childhood. It leaps down precipices, runs forth laughing in the dimpling sunshine, and then, shy as a mountain nymph, it dodges behind a knotty copse of evergreens. In approaching the summit level, you traverse bridges built a hundred feet above other mountain streams, tearing along their deep-worn beds; and at the 'deep cut,' your passage is hewn through solid rocks, whose mighty walls frown over you.

"Mountain scenery changes with every changing season—we might almost say with every change of atmosphere. In the spring, while the skirts of winter still hang over this high-cold region, and the trees seem afraid to put out their buds, the river breaks forth from its icy bars, and leaps and rushes on as if with conscious joy for its recovered liberty. It is the first sound that breaks upon the wearisome lingering of winter, and its music strikes upon the ear like the sweetest of human sounds, the morning song of a child waking one from a dreary dream.

"In summer, as there is little on these savage hills of what is peculiar to summer, flowers and fruitfulness, it is a happy chance to make this pass when piles of clouds hide the hot sun, and the rain is pouring down in sheets, when every little dropping rill that has dried away in the summer's heat is suddenly swelled into a waterfall, and over the banks and down the cliffs they come pouring and leaping along.

"In autumn, the beeches and maples on the hillsides are glowing with a metallic brightness, softened and set off most exquisitely by the evergreen of the towering pines, the massive cones of the Norway firs, and the graceful plumy hemlocks that intersperse them.

"In winter, the art that sends you swiftly and securely through these stern solitudes is most gratefully felt. The trees bend creaking before the howling blast, the snow is driving and drifting—here it is piled on either side in solid walls above your car, and there the hideous roots of the upturned stumps are bare. Even the hardy mountain children have shrunk from the biting blast, and the whimpering dog has begged an inside berth. You see no little towhead with its curious eyes peering at you through the icy window, you hear not even the salute of a bark. On you glide, by the aid of the most recent discoveries and ingenious contrivances of art, through a country whose face is still marked with the savage grandeur of its primeval condition.

"In descending this plane no steam is required, but on the contrary, the "brakes" are put on to prevent too great speed from the

force of gravity. We have seen a train of loaded wood cars make the descent at a frightful speed with no engine, the friction upon the brakes throwing out sparks of fire, visible in the daytime, and leaving a train of smoke behind, long after the cars were out of sight and hearing.

"North Becket, the next station, is a small village in the northern part of the town of Becket. Large quantities of charcoal are annually carried to Boston from this town. Just before reaching this place, the hills seem to break away, the country becomes open, and the prospect extended. At Washington Summit is the most formidable rock cutting upon the Western Railroad; being over half a mile in length, and 55 feet deep in its greatest depth. There is likewise a heavy embankment just before reaching this "cut," under which the Westfield River, now a mere rivulet, crosses the line for the first time.

"Washington. At this station there are but very few houses, and but very little business done. The land is cold, and much of it devoted to pasturing. The main village in the town is some three miles to the southeast.

"From Washington to Hinsdale, a distance of nearly five miles, the road passes over the high table land dividing the waters which fall into Connecticut River on the east, from those which flow westerly, and fall into the Housatonic River. The course of the line is nearly north, and the grade nearly level, though somewhat undulating. From the elevations in this vicinity, the prospect is at once extensive and imposing. The blue summits of the Catskill Mountains can be seen in clear weather. Hinsdale, the next station, lies on the western side of the Green Mountain range. There is some water power in the town, which is moderately improved, though the principal employment of the inhabitants is in agriculture. About one hundred yards west of the station is the beginning of a descending plane of 76 feet per mile, for six miles. This rapid fall was found to be unavoidable. Many experimental lines were surveyed, yet it was ascertained that the line now built was the best. The east branch of the Housatonic River, at the beginning of this plane, is but a short distance to the north, yet so rapidly does that stream fall, that even with the heavy 76 feet grade, the railroad is thrown some distance up the hillside, in order to equalize the descent. Aside from the grade, the only serious obstacles to overcome on this section were a very deep and expensive excavation, and a high embankment, which follow each other about two miles below the Hinsdale Station. More than 150,000 cubic yards of earth were removed from the cutting, the embankment requiring 175,000 yards. After passing these, the view on the north side of the line from the cars is extended and beautiful in the highest degree. The Housatonic, now considerably below, winds through a rich and fertile meadow; the village of Dalton is spread out among the trees in full view; while, far to the north, a chain of hills, covered with a thick forest, presents a rough contrast

to the delightful meadows near at hand. Dalton Station is a short distance south from the village. Crossing the east branch of the Housatonic, by slightly ascending grade, we arrive at Pittsfield, which is half way between Springfield and Albany. The Indian name of this place was Pontoosuc. This is an extremely beautiful place, being situated nearly in the center of the rich valley of the Housatonic River. At a distance, on nearly all sides, there are high hills. The village is about one thousand feet above the level of the sea. It contains a considerable number of handsome buildings, and is rapidly increasing in size and importance. The main street is broad and handsome, and extends through the whole village. The Berkshire Festival, held at Pittsfield in August, 1844, was, probably, the most interesting and successful event of the kind in the history of our country. It was a gathering of the emigrants from Berkshire County, and its own citizens; and the exercises of the occasion were a sermon, a poem, and an oration, with addresses, closing with the sociality of a public dinner. Eighteen of the twenty-six states were represented.

"The station at Pittsfield is built directly over the track, to which access is had by a flight of steps on each side.

"One mile west of Pittsfield, we reach the bottom of another plane, which rises less rapidly than the principal one just past, to Richmond Summit, six miles distant. The grade, for the most part, is easy.

"Shaker Village is the next station. It is about equi-distant from Shaker Village on the north, and Stearnsville, a busy manufacturing village on the south; the former being in the town of Hancock, the latter in Pittsfield. At the village upon the north side, which can be seen from the station, there is a family of more than two hundred Shakers. They own about two thousand acres of land, and make all sorts of wares, cultivate all varieties of fruit, grain, and vegetables in abundance. They own a large circular barn in common, two hundred and seventy feet in compass, built of stone, and sufficiently high to contain a vast amount of hay and grain. These Shakers hold that God is male and female, that Christ was the male Saviour, and that Ann Lee, called sometimes Mother Ann, was the female Saviour. They also hold that marriage is unlawful, and that they who do not marry only are saved. They require all the members to make confession of sins to the elders, who profess to have special revelations. They profess to have all things in common, but, as might be expected, the property, as well as the association, is controlled by a few leading members.

"Richmond, another agricultural town, is situated in a valley four miles from Shaker Village. The scenery around this place has been long noted for its beauty. A rapid descent of three miles now brings us to the State Line, the last station in Massachusetts. In passing down this plane, there is a fine view of Saddleback Mountain, from the railroad. Being directly down the track, it can only be seen from the rear car. State Line Station is within the town of West Stock-

bridge, a short distance from the village. Here the Housatonic Railroad, from West Stockbridge to Bridgeport, Connecticut, joins the Western; here, also, the Hudson and Berkshire, and the Albany and West Stockbridge Roads begin. The former extends to Hudson, New York. The rails are of wood, covered with straps of iron. During a part of the year 1842, this road, as far as Chatham Corner, was

North Street from Radio Station Looking North, Pittsfield

used for the passage of the cars from Boston to Albany, owing to the unfinished state of the new and improved line now used between these points.

"Three miles west, at Curtis' Summit, the line passes a tunnel cut through solid rock. It is short, being only 548 feet in length. It is somewhat remarkable, that in the New England States, with one thousand miles of railroad in operation, crossing mountains and valleys in almost every direction, there should be but three tunnels, and these of inconsiderable length. It might be naturally supposed, that in a country as hilly as our own, the frequent occurrence of these works of art would be indispensable. In England, the case is widely different. On the London and Brighton line, fifty miles in length, there are six tunnels, measuring, in the aggregate, over

three and half miles, and costing nearly two millions of dollars. On the Wolverton line, 52 miles in length, there are six more; one of which, the Watford Tunnel, is a mile and half long, and cost $750,000. It is found that a tunnel through solid rock costs no more than would an open cutting forty feet deep. After passing the tunnel, there is a descending plane of forty feet per mile, nearly twelve miles in length. Canaan is the first stopping place. Passengers for New Lebanon Springs can leave the line at this station. These springs are in the town of New Lebanon, several miles distant from the railroad. They are in a delightful valley, surrounded by high and well cultivated hills; and are visited every summer, by travellers from all parts of the country. The springs are on the side of the hill, and are so abundant, that a small water power is created. They are considered beneficial in internal obstructions, salt-rheum, and cutaneous affections generally. The water is tasteless, pure as any crystal, inodorous, and soft. The temperature is 72° of Fahrenheit, or near summer heat, which renders bathing delightful. Other springs are met with in the neighborhood, the water of which are nearly as cold as ice. There is an establishment for "Water Cure" at this place. If the waters of either cold or warm springs can cure any of "the ills which flesh is heir to," this delightful spot offers rare attractions for all classes of sufferers to go and be healed.

"East Chatham Station is exactly upon the line between Canaan and Chatham. Two miles beyond, the Hudson and Berkshire Railroad and Steine Kill Creek pass under the track, and two miles further, the two roads again cross each other at grade. From thence to Chatham Corners, they follow close together, side by side. To avoid making abrupt curves, the Albany and West Stockbridge line crosses the creek three times within a half mile.

"Chatham Corner is the next station. Here the two roads separate,—the Hudson line taking a southerly direction toward the city of Hudson. The New York and Albany Railroad (the Haarlem Extension) will unite with the Albany road at this place when completed.

"There is a flourishing village here. Large quantities of swine are annually carried to Brighton market from the neighborhood. There is also some considerable manufacturing done.

"Leaving Chatham Corners, the Albany road makes an abrupt curve, and, for two miles, runs directly north. It passes over Steine Kill Creek, and a highway on a high wooden bridge, sixty-five feet above the water. Soon after crossing this bridge, the traveller will obtain a fine view of the Catskill Mountains in the distance. They lie about 12 miles west of Hudson River, and are a place of considerable resort in the summer season. The Catskill Mountain House, built for the reception of visitors, is situated upon the summit of one of the most easterly peaks, at an elevation of 3,000 feet above the sea.

"The mountain is here crowned by a table rock of immense size, on which the house is built. This rock terminates, a few feet in front of the house, in a fearful precipice, from the brow of which

the inexperienced beholder starts back in uncontrollable alarm. In the rear, peaks upon peaks rise in every direction, and far away in the distance, all covered with luxuriant foliage. No description can do justice to the almost illimitable prospect in front. Standing upon the piazza or the rock just mentioned, you seem to have left the earth, and to be gazing from some ethereal height down upon the world and its concerns. You see nothing above, or around you,—all is below,—even the clouds wheel and roll in fleecy grandeur at your feet. Forests, meadows, harvest-fields, plains, mountains, rivers, lakes, cottages, villages and cities, are in every direction. A deep repose seems to have settled upon the world. No sound reaches you, except, perhaps, the rattle of the thunder from some distant hill, or the sweet song of the mountain bird upon the tree beneath you.

"Chatham Centre, the third station in this town, lies upon the west line of the town. Two miles beyond, is Kinderhook. The main village is several miles from the station. The surface of the town is diversified, and the soil is good. This is the birthplace of Martin Van Buren, ex-President of the United States. His residence is two miles south of the village, not visible from the cars. The New York and Albany Magnetic Telegraph strikes the railroad at this station.

"Schodack, the last station before reaching Greenbush, is a thriving agricultural town, eight miles from Albany. The surface is somewhat hilly, though the soil is good. At 195½ miles, the passenger will get the first view of Hudson River, which, from hence to Greenbush, is frequently seen. The cars being nearly one hundred and fifty feet above the river, the prospect is extended and very interesting. The river can be seen winding through the valley for several miles north and south, the meadows carpeted with green, the villages with their neat white buildings, and the blue summits of the Catskills,—all tend to render the picture interesting and lovely. Soon the city of Albany, on the opposite bank of the river, appears, the streets rising from the water, one above the other, in regular succession. A few more puffs from our iron steed and we are at Greenbush, the last station upon the road. This is destined to be a place of great business. The Hudson River Railroad terminates here, the Albany and West Stockbridge and the Haarlem Extension terminate here, and the Troy and Greenbush Railroad terminates here. The Western Railroad Company have erected upon what was an island, a commodious passenger house, besides several large car buildings and freight depots. The new freight house is the largest building in the United States. It was built under the superintendence of Mr. Witt. It extends quite across the island. The walls are 19 feet high, 9 feet thick at the base, and 5½ feet thick at the top. The building covers an area of two and a half acres, being seven hundred and fifty feet in length, and one hundred and thirty-three in breadth. The cost of the building will not vary much from $100,000.

"At Greenbush, the passengers for Troy take the cars for that place without crossing the river. Albany passengers step on board the ferry boat, and a few minutes lands them on the Albany side."

Railroads

The world's first railways were conceived of necessity and born in the coal mines of Northumberland, in the north of England. At some period between the years 1600 and 1650, for the transport of coal from the mine to an available shipping point, a tramway and tramcars were gradually evolved, wholly without any prior knowledge of the ways and means of such a mechanical unit. Only by a process of evolution, with no guiding star to follow, could such an end have been attained. The uninitiated could not visualize a power plant that would propel cars to some distant point and at the same time transport the power plant itself, the whole being a single unit. Such a combination was utterly incomprehensible.

A double line of parallel beams, called trams, were secured to the ground and furnished with flanges to prevent the wheels of the vehicle from derailing a car by slipping off the trams. Along these flanged beams or trams, wagons were drawn by horses with such comparative ease that instead of a load of seventeen hundredweight on a common road, a load of forty-two hundredweight could be drawn by a single horse. From the colloquial designation of the beams or rails as trams, came the word tramway as relating to the railway and tramcar as representing the vehicle itself.

The seventeenth century not being conducive to mechanical improvement, it was not until 1700 that any material advance was apparent, but during the period from 1740 to 1775, cast iron rails were substituted for the original wooden trams. Instead of a single large tramcar, a number of smaller ones were linked together,—the germ of the modern train, and the flanges were put on the wheels instead of on the rails. Thus the idea was developed year by year and bit by bit until in 1814, Stephenson supplied the steam locomotive.

In the meantime, the increasing use of canals not only turned the public mind in that direction but also raised up a powerful canal interest which viewed the progress of the railways with extreme jealousy and ill-will.

In Massachusetts, as in England, the first railroad was operated by horse-power and was designed to transport granite for the Bunker Hill monument from the quarries at Neponset River.

Despite the mediocre showing of the canals in America, as late as 1825, Governor Eustis appointed a commission to determine a canal route from Boston to Albany at an estimated cost of over $6,000,000 including a tunnel through Hoosac Mountain. However, the growth and profitable operation of steam railways in England so quieted the general hostile view point that objectors to the new trend were rather completely silenced.

The records make it quite apparent that in Massachusetts, some early railroad proposals contemplated the use of horse-power only

and provided that the roads should be state owned but used by the public with their own conveyances, as the doctor's chaise or the industrialist's transport wagon, making payment for toll charges at established toll gates. Such a combination would have been ideal in many ways,—a glorified turnpike equipped with rails adapted to the vehicle of the traveler. It would have been but a question of time before some genius supplied a mechanical horse,—as Thomas Blanchard actually did. But Blanchard was ahead of his times, no rails being ready for his automobile of 1826, while the roads were wholly unfit for his use.

In 1827 a legislative commission conducted surveys for a railway route from Boston to the Hudson near Albany and two years later that board recommended that such a line be built by the state with a horse-path between the rails and paths for the attendant railroad men alongside. Flat rails were to be laid on granite slabs.

In 1831 the Boston and Worcester railroad was organized to build a gravity road where the cars should be hauled over the upward grades by stationary hydraulic engines operated by adjacent streams,—a type of installation later seen in the cable-cars of New York and other large cities. More conventional counsel prevailing, steam locomotives of English design were acquired and were soon drawing the surviving stage coaches of an earlier day or their counterparts, over wooden rails surmounted by thin iron plates. By 1835, trains were in operation between Boston and Worcester and in 1839 the extension to Springfield was completed. Soon after the road was continued to the New York State line.

At last the heights and the depths of the Berkshires had met their match. Comparatively unlimited power was at the command of the engineer. Blizzards could be fought with confidence as to the ultimate result. That was over a century ago, yet the dependability, running-time and comfort of travel in those early days compares with those of today to a surprisingly favorable degree.

In October, 1839, the following item appeared in the pages of the Springfield *Republican*:—

"Western Railroad.—This road will be opened for the transportation of passengers between Worcester and Springfield, on Tuesday, October 1, 1839. The trains to run regularly as follows—Leave Worcester daily, Sundays excepted, at 10 A. M. and 4 1-2 P. M. immediately after the arrival of the trains over the Boston and Worcester Road, leaving Boston at 7 A. M. and 1 1-2 P. M. Leave Springfield daily, Sundays excepted at 6 1-2 A. M. and 1 P. M. arriving in Worcester to connect with the trains leaving for Boston at 10 A. M. and 4 1-2 P. M.

Tickets for Springfield or at any way station on the Western Road to be purchased at the office of the Western R. R. Depot, Springfield.

GEORGE W. WHISTLER, Engineer.

October 2, 1839."

This George W. Whistler whose name was appended to the announcement was of course not a locomotive engineer but was engineer in charge of the whole enterprise. He was father of the noted artist, James Abbott McNeill Whistler, and their home was the house at Chestnut and Edwards streets recently demolished to make room for the present telephone building on that site.

In the Springfield *Republican* in May, 1842, it was reported that "Major George Whistler has received an invitation from the Emperor of Russia to go to St. Petersburg and superintend the building of a railroad at a salary of $18,000 per annum and has accepted the offer". Actually, Whistler did undertake the task but died in Russia before it was completed.

Though the canal, by-passing the Enfield Rapids was opened for use in 1829, providing reasonably dependable transportation service, calls for a railroad south from Springfield became so insistent that in 1844 the Hartford and Springfield Railroad was opened, uniting Springfield with New Haven, where steamboats to New York were available.

This line was equipped with the new "T" rail and the following year the Hartford and New Haven section of the road was supplied with the same type. To make way for the tracks entering Springfield it was necessary to remove the pioneer cemetery at the foot of Elm Street and dispose of various other old landmarks.

After numerous authorizations and alterations, the Connecticut River Railroad was opened from Springfield to Chicopee, four miles, in February, 1845, and to Northampton in December of the same year. In August, 1846, the road was in operation to South Deerfield and on the twenty-third of the succeeding November, cars ran through from Springfield to Greenfield. In seven years the component parts of Western Massachusetts had been drawn wonderfully close together.

In March, 1847, the wooden passenger station at Springfield was completely destroyed by fire and was replaced by a brick Union Station, four-hundred feet long from east to west and one-hundred and thirteen feet wide. Rather complete details of this station are preserved in a well known etching by George S. Payne.

The fire which destroyed the old "depot" caused considerable excitement and perturbation. A hundred years ago, an even more democratic spirit than is seen today yoked together small boys of all grades of society. On this occasion, a group of youngsters of the "best families", joined with others from the other side of the tracks to extract from the excitement, every iota of joy that was to be had. Swarming over the roof they did their utmost to fan the flames. Suddenly, with no warning whatever, the great roof fell amid a shower of millions of sparks and glowing embers. Not a voice was heard as the stunned and muted bystanders hoped against hope that some lucky survivors would emerge from the holocaust; but no voice came. Sadly the people wended their way home, to return in the morning to search the ruins.

Throughout the night, peals of unbelieving joy could be heard as parents welcomed abashed youths who had finally had their fill of excitement, and had returned to the fold. When it was certain that all the wandering sheep were present and accounted for, it was learned that from their vantage point on the peak of the building the boys had realized what was about to happen to the roof and every rapscallion of the lot slid safely to the ground in ample time to avoid any danger to himself. For years after, whenever the "boys" foregathered, that wild night was recalled with many a sly chuckle.

In the days of the stage coach, the surface of the roads was ground to powder by myriads of steel-shod feet, resulting in clouds of dust choking the passengers and spreading great clouds of dust over the belongings of outraged housewives. Partial relief was had from the use of water-sprinkling carts, but it is obvious that these were in use only in thickly settled districts. It had been anticipated that this nuisance would cease when the horses were replaced with steam, but it was found that the suction caused by the fast moving trains greatly multiplied the objectionable conditions. Sprinkling having been found impractical, the surface layer of dirt was replaced with gravel which gave such efficacious results that it became standard practice.

In 1848 the *New York Herald* reported that "the dust encountered by travelers on railroads in some parts of the country is quite as annoying as when traveling in stage coaches. We learn that the Camden and Amboy road have commenced graveling their entire road. It is likely that the Jersey road will follow the example. The plan is better than to sprinkle the road".

In time, the gravel was replaced with broken trap-rock, called road-metal, which was tamped in between the sleepers with long-handled tamping rods. This process, known as ballasting, gave such unexpected solidity to the road bed that eventually it was adopted by all the roads of the country.

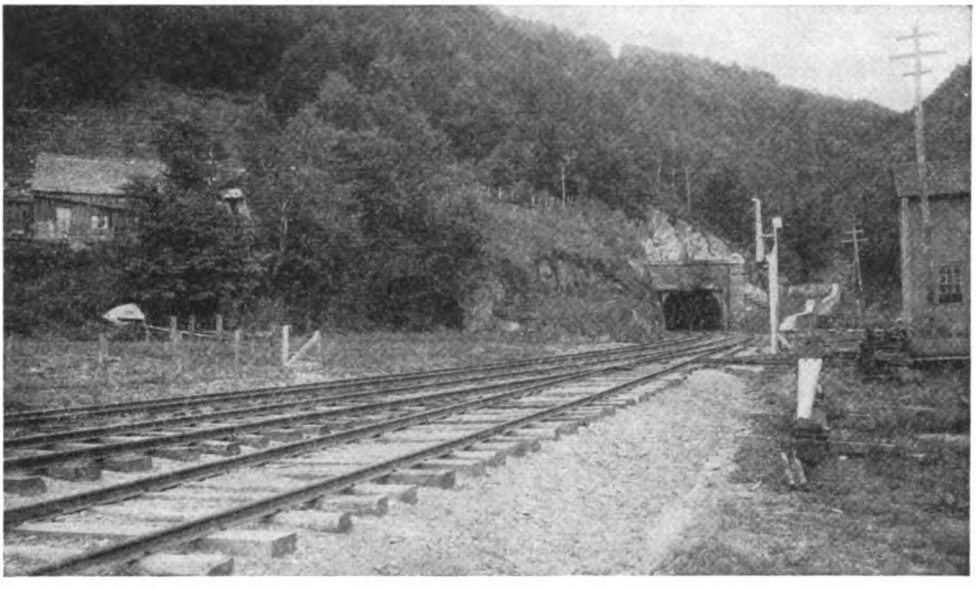
In 1867 occurred the inevitable, when the Boston & Worcester road and the Western were consolidated as the Boston & Albany Railroad, forming a continuous two-hundred mile road from Albany to Boston. It was then considered one of the great lines of the country and the envy of many a railroad magnate of large interests. Its management was in the hands of capable men, intent on considering even the minor details of their task with a forward look.

On May 5, 1876, the Springfield *Republican* reported that "the Boston & Albany Railroad have lately placed lamps in several cars and will probably introduce them into all, in place of the weak candles in use. There has been some hesitation in the movement from fear of the oil, but after they found that mineral sperm oil, such as is used in the lamps, would extinguish a fire of shavings soaked in petroleum, this objection vanished. The question of expense was then

tested and it was found that the lamps, with two burners, cost no more for fuel than as many candles and furnish several times as much light".

Despite opinions to the contrary, changes occurred swiftly in those days. Five years later, some streets of Springfield were lighted by electricity.

The concern of the railroad for the safety and comfort of its patrons was proverbial. Travel by stage coach had been somewhat akin to a nightmare. Many schedules called for night-time operation.



(Photograph by Harry Andrew Wright, 1890)

East Portal of Hoosac Tunnel

when artificial light was to be had only from oil lanterns. Coaches were unwieldly and top-heavy and turned completely over with little warning. A recent authority has said that "there were literally more persons killed and injured each year in Massachusetts, through accidents to stagecoaches than there are now through accidents to railroad trains". In 1898, when petroleum products had become available in quantity, the Boston and Albany attempted to solve the ever present dust problem by using a special oil car to sprinkle the roadbed from Worcester to Webster Junction, but the results of the experiment did not justify continuance of the practice.

A fixture of the "gay nineties", known as "stockholder's day", was the annual meeting in Boston of the stockholders of the Boston & Albany. Investment in the company was considered of the best and the stock was largely owned by banks, insurance companies and wealthy individuals of Massachusetts. So great a percentage of the

total issue was held in large blocks that the railroad officials were uneasy at the thought of how easily a rival company could gain control of it by purchasing a few of those large blocks. To effect a diversification of ownership, "Stockholder's Day" was announced. This provided for an annual meeting of the stockholders in Boston, to which each stockholder was offered free transportation over the road, a stock certificate serving as a pass. At once, more humble investors bought single shares,—banks turned in hundred-share certificates in exchange for one-share units to loan out to valued small customers and impecunious relatives.

Trains could be boarded any time after midnight of the great day and entrainment for the return trip must be before the following midnight. Everything was of the best. Regular trains were supplemented by extras, all with spick and span equipment. For the exclusive, Pullmans were available at the usual extra charge.

On arrival at the "Hub", a few conscientious individuals appeared at the meeting only to learn that such was the last thing that the management wanted. So they went their way on pleasure bent, while the directors engineered the voting to thir own satisfaction. Stockholders visited the Old South and the Paul Revere House. Others sat through hours of vaudeville while many canoed on the Charles River. "Jordon's" sold quantities of white goods.

The following day, borrowed certificates were returned to their owners, except in cases where they were assumed to have been the equivalent of a circus pass and destroyed on the way home. All in all, it was a great day and long remembered. So it continued, until that long anticipated day when the New York Central gained control of the road.

Chapter XLII

Local Transportation in Western Massachusetts

By Donald E. Shaw

THE story of local public transportation in Western Massachusetts really should start with the omnibus, in style a variant of the stage coach which was used over the longer distances, and our first medium of scheduled overland passenger transport.

The stage coach itself has a most interesting story, but it is a bit beyond the scope of this record. The omnibus, however, should be given a place here. When, in the course of transportation evolution, it was found that the horse that pulled the omnibus could do a much better job if it rode on rails, the omnibus gave way to the horsecar, which in turn was eventually succeeded by the electric trolley; which, though it has now both come and gone hereabouts, well within the memory of persons now living, played a major part in setting the travel manners and customs of four Western Massachusetts generations.

The Omnibuses and the Herdics

The first use of the local omnibus in this area would appear to have been late in 1839, and but five years after its first introduction to the streets of Boston. What is believed to have been the very first Western Massachusetts omnibus route was started in Springfield in connection with the inauguration of train service on the Western Railroad, then newly-opened through to that point from Worcester.

Primarily intended as a local convenience to railroad travelers, this early omnibus had no apparent restrictions in its movements about town—although it did have a route. According to the announcement in the Springfield *Republican* in October, 1839, the line would run "through Main Street to Warriner's United States Hotel, from thence through State Street to Richards' Columbian Coffee House, calling at the intermediate public houses and leaving passengers at any place on Main Street or State Street between the Depot and the Columbian Coffee House for twelve and one-half cents each." The omnibus would also go to any other part of the village and call for railroad passengers for twenty-five cents on condition that the prospective travelers' names were left at the Stage Office on Main Street, one hour previous to train time.

Edward F. Moseley, who drove the stage between Springfield and Lowell for his brother Nathaniel, at one time, seems to have later operated the first "regular" omnibus line in Springfield, over a route extending between the Massasoit House and the corner of State and Walnut streets, at that time close to the easterly fringe of town. About 1849 a line was also started between the Depot and the so-called "Water Cure" in the South End.

Hill at Howard Street, Springfield, 1936

However, it would appear that there were no important, permanent, regularly-scheduled local omnibus routes in operation until about 1860, when S. J. (Jerome) Tallmadge, who ran a livery business in Springfield in the rear of the Goodrich Block, started an hourly omnibus service between the Depot and the Rockingham House, on State Street opposite the United States Armory. They came thick and fast after that.

In 1862 a line was opened from the Exchange Hotel (on the west side of Main Street near State Street, about where the Walker Building now is located) to Chicopee. In 1864 H. L. (Luke) Pease started his well-known Armory Hill line, with a half hour service to State and Oak streets. In the same year, Tallmadge is supposed to have put on his Round Hill-Mill River line serving the length of Main Street south to the famed "Water Cure" on York Street, and R. L. Doane added a competitive note by inaugurating another Armory Hill line. The Civil War was causing a "boom" at the

Springfield Armory, and as many of the armorers lived out of the city and came to work by train, their patronage was to greatly stimulate the development of local omnibus service in Springfield during the war years. At that time the city had a population of some 24,000 and of the approximately 6,900 names which appeared in the City Directory at the time, at least one-third are shown as employees of the Armory's Hill or Watershops plants.

D. Bates inaugurated still another Armory Hill line in 1865, and E. F. and R. P. Markham of East Longmeadow, who bought out Tallmadge in the same year, began operation of their Round Hill, Depot and Watershops (via Maple Street) service.

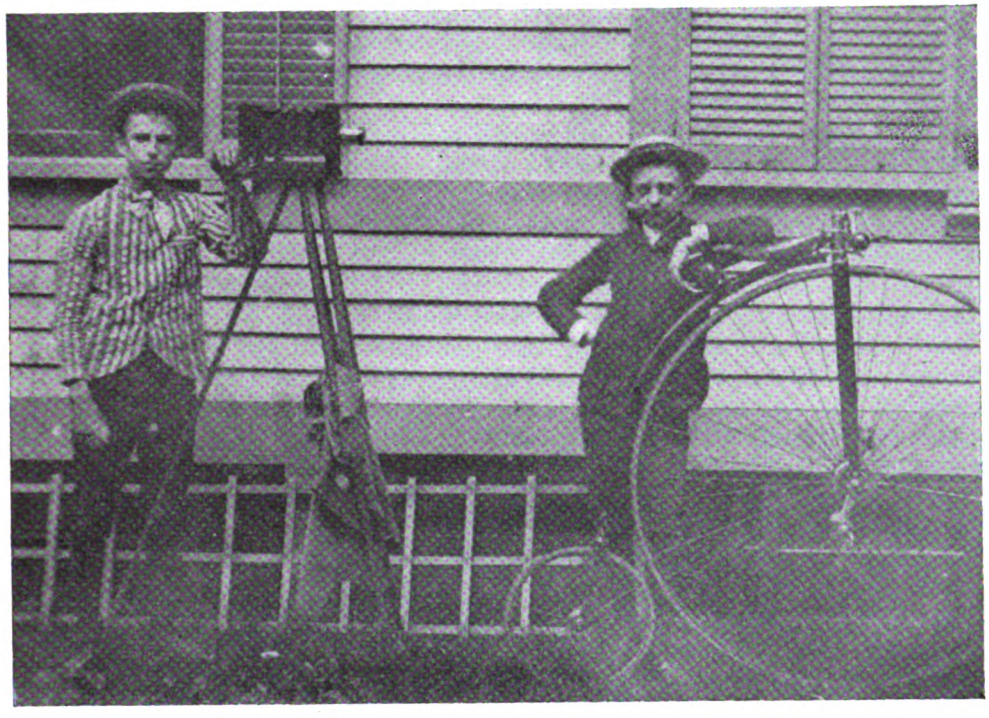
This brings us to consideration of James W. Lull, who came to Springfield from Stafford, Connecticut, and bought out the Markhams' 'bus line in 1867. Mr. Lull, a strong fraternal man, was to become Springfield's most well-remembered omnibus operator. In an interview in 1915, a few years before his death, his experiences were reviewed at length. When he took over the Markhams' route, trips were made from the Depot to the Watershops in the morning, and back at night,—rarely on a schedule at any other time.

Lull bought new 'buses, increased his stable from seven or eight horses to double that number, and improved the service. He had two 'buses in regular operation, more in rush hours. Twenty minutes per trip was allowed between the Depot and the Watershops, via Maple Street,—a half hour in bad weather, for there was still the mud to contend with, despite the fact that Main Street had been paved in 1864. Mr. Lull put four horses on his 'buses at four o'clock, when "rush hour" business began to get heavy. The 'buses, supposed to seat eighteen, often carried forty, with some hanging on the outside. It must have been quite a pull, even with four horses, on the Central Street Hill, at such times! Fares were passed up through to the driver from the inside, the passenger being more or less placed upon his honor with respect to "paying up". Fares were three tickets for a quarter. Mr. Lull has told of how it was once the custom for the passenger to pull the driver's leg once, if he wanted to be let off on the right hand side of Main Street, and twice if he wanted the left side,—traffic rules being most informal in those days.

During the widespread "epizootic" epidemic of 1872, which carried off many horses, no omnibuses ran in Springfield for ten days. During the worst of the emergency, while men and oxen pulled teams and delivery carts through the streets, Mr. Lull kept his horses in the stable, and was always proud to be able to say that he did not lose one.

This colorful figure in Springfield's transportation in the '70s, who lived at 57 Florence Street for many years until his death in 1919 at the age of eighty-four, had many interesting experiences. When the North End Bridge was opened in 1876, he is credited with having driven the first vehicle over it,—a heavily-loaded four-horse omnibus which he "drove like mad" across the bridge, to test its soundness.

With the coming of the first horse-cars to Springfield in 1870, the omnibus lost ground rapidly as a major element in local transportation there. Mr. Lull, who in the later years had operated the business in partnership with his brother, had put on another Watershops route, via Union and Walnut streets, by the mid '70s, but finally sold out to the street railway in 1881, although urged by loyal patrons along his Maple Street route to keep going. However, he had



Boyhood in the Eighties

seen the trend, and figured that the street railway would eventually get his business in one way or another. The latter, having purchased Lull's equipment, used his horses for some time, even running his 'buses on occasion in the winter when the going was bad for the horse-cars. As late as 1915 one of his old omnibuses, the last one known to be reasonably intact hereabouts, still stood forlornly, without wheels, on the Bay Street property of Adoniram Bradley. It had four windows on each side and two on the end. Faded lettering still indicated its one-time route,—from the Watershops through Central, Maple and Main streets to the Depot. It also carried a sign "South Ferry",* while the name "J. W. Lull" had been on the back. This

* The South Ferry, not to be confused with the so-called "Agawam Ferry", had been authorized in March, 1864, and ran from the foot of York Street, Springfield, across the Connecticut River, up until the construction of the South End Bridge fifteen years later.

was the last visual reminder of what had once been a flourishing business.

But this is getting us ahead of our story. In addition to Lull, a list of Springfield omnibus drivers during the later days, should include S. J. Bennett who was running the Main Street line by the late 1860s, and Smith & Fuller who had bought out the State Street line, and ran it until the coming of the horse-cars in 1870, at which time it was taken over by the street railway and operated for a time under the latter's management. In connection with this move, the 'bus fare was reduced to eight cents to make it the same as on the cars, and with the street railway's reduced-rate tickets being accepted on both cars and 'buses.

Although they bought out Smith & Fuller at the outset, and Lull later on, the street railway did not take over C. A. Knapp's Watershops-Depot-via Walnut Street 'bus line, or C. W. Hoisington's route from the Springfield Depot across the Old Toll Bridge to the West Springfield Post Office. These two lines were not considered as competitive by the street-railway, and they operated independently and unmolested from about 1875 until the early '80s. Outside interests then injected themselves into the Springfield local transportation picture by introducing a vehicle known as the "herdic", which was destined to prolong the active days of the omnibus in Springfield for a few more years. The herdic, which took its name from its originator Peter Herdic, was actually a four-wheeled omnibus with a rear entrance, a cranked axle, low-hung body and side seats. The Worcester Herdic Coach Company invaded the field by starting two lines of its "coaches" in Springfield on August 15, 1882. The routes were altered several times before they were finally stabilized, after which, in response to increased patronage, the company added a third route and improved the service on the others.

These herdic routes which were operated under the local direction of H. R. Knapp, superintendent, with headquarters at 310 Walnut Street, connected the following points:

Watershops and Depot
via Walnut and Union streets.
Court Square and West Springfield
via Bridge Street and the Old Toll Bridge
Main to Lincoln St. (Armory Hill)
via Worthington Street

The Watershops route was to some extent, competitive with the horsecars. The West Springfield line replaced Hoisington's omnibus. The Worthington Street line was an entirely new service.

With the Springfield Street Railway's horsecar lines steadily reaching out into new areas, the herdics were not to remain long on the scene as mass-public carriers. Mr. Knapp, who appeared to have shortly acquired the local herdic business in his own name, removed his headquarters to the West Springfield Hotel, and continued opera-

tion of the Depot-West Springfield herdic line—the last omnibus route left hereabouts by 1886—up until the street railway built a horse car line to West Springfield, during the following year, and put him out of business.

Thus the local omnibus, in one form or another, had both come and gone as a major transportation factor in the Springfield area, between 1839 and 1887. However, the hard-pressed Springfield Street Railway used these vehicles in emergency service during the blizzard of 1888, and some of them appear on the company's equipment list as late as 1889. As for the herdics, they would appear to have ended their usefulness locally in the role of depot hacks, and at about the same time. Although the hackman's cry of "Herdic, herdic!" echoing through the old Springfield Depot in the late 1880s, in effect was sounding the death knell of a once-thriving trade, the long-distance stage lines were to last somewhat longer. True, the coming of the steam railroads had forced many of these out of business earlier, yet a few of them, in somewhat emasculated form, survived into the early part of the present century. The so-called "Brimfield Stage" lasted until the opening of the Springfield-Worcester trolley line through that district in 1907, and was probably the last survivor of this once-picturesque mode of transportation in the western counties. But in these later days, it was a far cry from the colorful Concord coaches, proudly drawn by four horses over the old Southbridge-Palmer stage route,—at the end it was just an ordinary one-horse wagon that carried the Brimfield mail.

Going back to the old omnibus routes of Springfield, the hoary hand of Time has left its touch upon their principal termini of other years. The historic Rockingham House at State and Walnut streets has been gone for a quarter of a century now, but many of the older Armory buildings nearby would still look familiar to our great-grandfathers, could they see them today; and the mellowing three and one-half story Gunn Block on the southwest corner of State and Walnut, looks down upon modern traffic very much as it did back in 1836 when it was built in connection with a then thriving West Indies trade.

Down at the Watershops, though the main buildings inside the plant have been somewhat altered in recent years, the old Lincoln Hall Block across the way at Walnut and Mill streets, which housed many of the Watershops workers of a century ago, still stands virtually unchanged from the days when "Jimmy" Lull used to turn his omnibuses at its door.

While the omnibus set the stage for the coming of the horsecars in Springfield, it was a vehicle that never came into wide usage in the other, and smaller, Western Massachusetts communities. However, following an earlier venture with a horsecar, one S. D. Hobbs of Holyoke as early as 1875 was reversing a natural trend in progression by substituting an omnibus on his contract route between the Connecticut River Railroad Depot and the South Holyoke mills, and continued it in operation for several years.

Later, a man by the name of Robinson ran an omnibus route from Main Street, South Hadley Falls, to the Holyoke City Hall, with morning and evening trips to the mills at Main and South streets. Robinson operated the line about two years, up until the advent of the Holyoke Street Railway with its horsecars in 1884. After the latter had built its first horse railway line, Robinson purchased a second-hand herdic from "down Boston way" and ran this smaller vehicle over the route for about two months after the horsecars came on. It had seats for a couple of passengers along each side, and there was another seat up beside the driver.

An omnibus was also operated by the Holyoke Street Railway itself for a brief time. About November, 1887, a controversy arose between the street railway and South Hadley Falls authorities, with respect to the raising of the grade of Main Street in that town. The Holyoke Street Railway was not in favor of this, as their horsecar line had but recently been built, with its track at that time in line with the prevailing grade.

The upshot of the matter was that the town authorities began one day to pile cinders and other filling material over the tracks, which was as promptly removed by the street railway's plough. After this performance had been repeated several times, the latter finally gave up, hired one of the old 'buses which was still being used for sleigh rides and special parties around town, and ran it all the winter of 1887-88, connecting with the company's horsecars at the Valley Bridge over the canal, on the Holyoke side of the Connecticut River. The matter was eventually resolved to everybody's satisfaction, and the 'buses withdrawn from service.

Northampton, the cross-roads of important long-distance stage coach routes which ran between Boston and Albany, and between Springfield and Hanover, New Hampshire, in early days, also had a local omnibus service to neighboring villages. They were running between Northampton and Hadley by the late 1860s; and when the Northampton & Amherst Street Railway started business some thirty years later, 'buses were used in the early transfer of its passengers across the Connecticut River and into Northampton. Later electric cars were used on both sides of the river, and completion of this company's 1,288-foot trolley bridge (reputedly the longest bridge in the world to be used exclusively for street-cars) made through service between Northampton and Amherst possible without changing cars for the first time early in 1901.

The Horsecar Era

As originally projected, some of the steam railroads which have since threaded their ways through the hills of Western Massachusetts, had been planned as long-distance canals or as horse railroads. Unthinkable as it would appear today, the prospect of a journey from Boston to the Hudson River behind a team of plodding horses, with only the intermittent help of a few steam-powered stationary engines,

located at strategic points to help them over the very heaviest of the Berkshire grades, did not faze the railroad promoters of a century and a quarter ago.

A few of the long-distance canals were actually built, although the only one of importance hereabouts was the New Haven and Northampton Canal, which enjoyed a relatively brief,—and unprofitable,—popularity, until its future was doomed by the rapid strides in the development of the steam locomotive as a practical transportation medium, in the late 1830s. Thus, canals never did have a chance to successfully figure in the march of transportation progress in Western Massachusetts. Steam-propelled railroad trains had, in an amazingly short interval of time, demonstrated their practicability, and had the field of long-distance travel pretty much to themselves.

As for the horse railroads, the early plans for their adoption over long-distance routes died aborning,—and for very much the same reason. However, there still appeared to be a field for horse-drawn vehicles on rails, in strictly local service, as our small towns grew larger, and the larger towns became cities. Their adoption had been attended by marked success elsewhere,—notably in New York, Boston and other large cities,—where the omnibuses had developed definite inadequacy to the ever-increasing demands for mass transportation service.

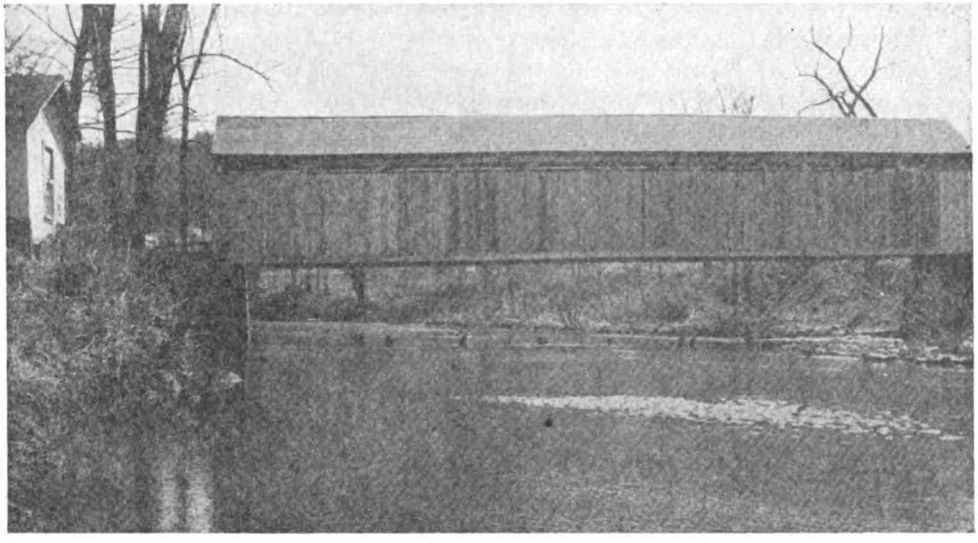
As a matter of fact, the era of the omnibus and that of the horsecar overlapped considerably. The first introduction of animal traction to railway service in Western Massachusetts came in the early 1850s when a horse-propelled passenger car was put on the recently built railroad between the Indian Orchard mills and the main line of the Western (now the Boston & Albany) Railroad, a few miles east of Springfield. Horses pulled the cars,—both passenger and freight,—up the grade to the main-line connection, while in the other direction they were allowed to coast down hill to Indian Orchard by gravity. At any rate, this was the first known instance of the use of a passenger horsecar in our western counties—and at a time when the omnibuses themselves were just coming into use in a few of our larger towns.

A charter was shortly to be given to another and larger project, incorporated as the Springfield Horse Railroad Company. However, this was allowed to languish, and no road was ever to be built under this name. Its chief claim to our attention is the fact that it was, in 1863, the first major project for an urban transit system to be promoted in the Commonwealth, west of Worcester. We will have more to say about this company a little later on.

Two years after the Springfield Horse Railroad received its charter from the Commonwealth, one Rufus Mosher of Holyoke entered into a contract with the Holyoke Paper Company to run a horsecar along the Race Street railroad tracks in that city, between the Germania Mills and the old Connecticut River Railroad Depot, a distance of about a mile. This line, which seems to have been operated without benefit of formal charter, ran for seven years. It

was called the South Holyoke Railroad and one car did the work, bearing the legend "Race Street Number 1".

Very soon after the line was opened, Mr. Mosher turned the contract over to S. J. Hobbs. The route paid well (the contract had been let for one hundred dollars a month!), with the little horsecar carrying eighty mill-hands back and forth daily between the South Holyoke mills and Depot Square. The driver of the car was John Powers. In 1875 Mr. Hobbs discontinued the horsecar line, and



(Courtesy of Pioneer Valley Association)

Covered Bridge, Conway

substituted an omnibus service—an odd reversal of the usual trend in transit progression. If Mr. Hobbs had "had his foresight cap on", as he himself said, he might have been an important figure in the development of the extensive Holyoke Street Railway system which was shortly to get under way in that rapidly-growing city.

Both the Indian Orchard and Holyoke operations were limited in scope, having been inaugurated to meet the specific transportation needs of individual mills and their employees; public convenience was secondary in each case, we may assume. It was not until 1866 that a bona-fide horse railroad, built under state charter for general, regularly-scheduled public passenger transportation over a permanent route, was put in operation in the western counties. This was in the town of Northampton; and since the original operating company is still in the local transportation business today, after over eighty years of continuous operation without material change in its corporate structure, it is worthy of our attention; for, having served the public's needs with horsecars, trolleys and buses, in progressive succession since 1866, the Northampton Street Railway is probably

the oldest enterprise of its kind in New England to still preserve the status of its original corporate entity.

The building of a horse railroad in Northampton was not, as one might suppose, locally promoted or financed. It was sponsored by Messrs. Thomas E. Hastings, Charles D. Olmstead, J. Wyman Jones and N. Curtis White, of New York, who came to Northampton for the purpose of giving vent to their speculative humors. The close of the Civil War had found a good deal of "free money" crying to be spent for some purpose other than war. Speculative fever was running high, and everybody seemed to be busy promoting some new venture into which this surplus of ready money could be easily channelled. Horse railroading was a fertile field, just beginning to beckon challengingly to the enterprising promoter.

Originally chartered as the Northampton & Williamsburgh Railroad, this pioneer Western Massachusetts horse railway was projected with the intention of building it through to the latter town, at an estimated cost of about $100,000. Upon the completion of the road, it was the intention to issue bonds in the amount of $200,000, take them to New York, and sell them at par to other capitalists who were snapping up most anything that looked reasonably good at the time. The bonds were printed, and all that hindered the execution of the plan was the refusal of a skeptical Massachusetts Legislature to grant permission to use them.

Not long after the horsecars went into service between Northampton and Florence, (which was as far as they got the street-railway for some years), L. W. Langdon, a Northampton inventor, introduced a steam engine with a boiler placed on the front of the car. Its introduction created more excitement in town than perhaps any other transportation change that was ever effected in Northampton. Permission to use steam power on the horse railroad was given in December, 1869, but the car was not to be an unqualified success. The operation of the engine racked the car severely, while escaping steam threw such a scare into passing horses that a great public clamor arose for its withdrawal from the streets. It was emphasized in the press that every animal on the highway took fright at the steam car, and "even Squire Chilson's old white pony pricked up its ears and tail, and took on a gay and hilarious attitude". This would never do, of course.

Tried out over the tracks of the Connecticut River Railroad between Northampton and Springfield, the car carried twenty passengers and made the trip in forty-five minutes. Hot debates ensued, however, regarding the permanent acceptability of this vehicle for street railway use. It was finally given up, after having furnished Northampton with plenty of hot discussion concerning its merits, over a considerable period of time.

Steam motor units hauling trailers, and of a type rather widely used elsewhere in America at the time, were to be briefly tried out by the Hoosac Valley Street Railway in the North Adams area, a quarter of a century later. This experimental operation was like-

wise soon abandoned. So far as is known, they represented the only two instances of the introduction of steam motive power, successful though it was on the railroads, to the local street railway lines of Western Massachusetts.

As for the Northampton horsecar line, it had early run into serious financial difficulties, although fortunately help was at hand and soon to come to the rescue. John C. Hammond of Northampton, was, with J. A. Sullivan, the savior of the road at a time when the question of selling the rails for old iron and going out of business, was being seriously discussed. The Northampton & Williamsburgh became the Northampton Street Railway by change of name in 1873, with the timely injection of new,—and this time locally raised,—capital, keeping the faltering horse railway on its feet. Mr. Hammond kept buying in the stock until he owned a controlling interest. Between 1892 and 1895, $250,000 of new money was put into the road, electricity was adopted as a motive power, and several new extensions were built to the original line, bringing the cars to Williamsburg, Easthampton and Bay State for the first time. The village of Williamsburg had particular cause for joyous celebration when the first electric car pulled into town in 1894. The community had been awaiting a street railway service of one kind or another for twenty-eight years, ever since the projection of the original horse railroad which had ambitiously carried its name, but had never gotten west of Florence in all that time.

The real pioneer in attempting to launch a horse railroad of any importance to the general public hereabouts, would appear to have been Chester W. Chapin, probably the wealthiest and most influential man in Hampden County a century ago, and whose widespread interests encompassed, at one time or another, all major transportation activities in the western counties. Steamboats, long-distance stage lines, railroads,—he had a hand in them all. Mr. Chapin was the last president of the Western Railroad prior to the merger which made it a part of the present Boston & Albany; and it was in this capacity, perhaps, that he played his most important part in the transportation development of Western Massachusetts.

It seems only natural, in view of the above, that Mr. Chapin should sooner or later interest himself in local transportation in his native Springfield area. His first important move in this direction was to be made in association with George Bliss, builder of the Western Railroad and its second president.

These men, together with Henry Alexander, Jr., were to be the leading incorporators of an enterprise known as the Springfield Horse Railroad Company, chartered by the Massachusetts Legislature under the Acts of 1863.

Although no horse railroad was ever to be built under this name, its organization had at least served to awaken public interest in the consideration of such possibilities; and the experiences of its organizers were to prove helpful to their successors a few years later on.

In the spring of 1868 Mr. Chapin, this time in association with Mr. Alexander, revived the idea of providing Springfield with a horse railroad. They were still getting very little encouragement from the public,—"We couldn't even raise the wind!" Mr. Chapin is said to have declared,—but they had faith enough in what they were doing to apply to Governor Bullock for a new charter, which was granted May 5, 1868. The name of this company was the Springfield Street Railway, with a capitalization set at $200,000.

There were still difficulties ahead. The Massachusetts statutes required that 50 per cent of the company's capital stock must be paid in before it could function. The difficulty of raising the necessary funds loomed so great that Messrs. Chapin and Alexander were finally prompted to turn their project over to George M. Atwater, who had recently returned to Springfield from Cleveland, Ohio, with an interest and knowledge of horse railroading practice that he was quite anxious to put to use here.

Mr. Atwater, too, working now with Chauncy L. Covell and Ethan S. Chapin, found it was hard work convincing prospective stockholders of the security of this type of investment. The newspapers were ridiculing it as a "hair-brained scheme", and lively opposition developed among the liverymen who foresaw the menace of a horse railroad to their own businesses.

The enterprise finally got off to a start when a sufficient amount had been subscribed by some sixty-four persons who had become interested enough in the project to invest money in it.* In July, Mr. Atwater filed his petition with the Springfield city government for permission to build a horse railway. Despite official skepticism of the project, the petition was granted. The Springfield Street Railway was now formally and permanently organized, with an initial $50,000 paid in, and with the following five prominent Springfield men in its first directorate: George M. Atwater, Homer Foot, Gurdon Bill, Willis Phelps and Chauncy L. Covell.

Mr. Atwater was chosen as the company's first president, and Gideon Wells was made its first corporation clerk.

About the first official act of the directors was to take over Smith & Fuller's omnibus line, which it was to keep in operation until the horsecars went in service the following year.

The company wanted a location at North Main and Carew streets for its stables, but met with objections from property-holders in that neighborhood. They then decided to accept an offer of land further north, which had been made in the hope that the proposed horse railway might be of material aid in the development of that part of the city lying above Carew Street.

Three and one-half acres of land,—a donation from the Hooker estate,—were acquired by the new company for its stable and car

* Despairing of being able to secure the necessary stock subscription, Mr. Atwater had applied to the Legislature for a new charter with a reduced authorized capitalization of $100,000, which was soon granted.

station,* to be constructed in the summer of 1869. J. E. Smith, former overseer of the Glasgow Mills at South Hadley Falls, was engaged as the road's first superintendent.

The grant of location had given the newly-enfranchised Springfield Street Railway the right to build its line over Chicopee,† Main and State streets, and during the winter of 1869-70 construction of the road got under way.

Despite numerous difficulties and delays, the contractors were able to complete their work a little over two weeks in advance of the stipulated time limit. On March 9th, 1870, Mr. Smith himself was at the reins as Springfield's first horsecar, just twelve feet long and painted yellow, came down the street with President Atwater riding alongside in his private carriage.

This first route extended from the stables at Hooker and Chicopee streets, south along Chicopee and Main to State Street, and up State to Oak Street, a distance of just 2.71 miles.

The first Springfield equipment consisted of four "bob-tailed" cars, two of them ten feet in length, the other two, twelve feet. The road started off with twenty-five horses. The first rate of fare was eight cents cash, with sixteen "tickets" selling for a dollar. The tickets were of a rubber substance, and about the size of the bus tokens that are currently in use today. Fares for children were five cents.

At the start the Boston & Albany Railroad would not permit the installation of crossing frogs over its railroad tracks at the Depot, and the horsecars had to bounce over the Main Street crossing as best they could, without benefit of rails until they got beyond it.

In these earliest cars, the driver was cooped up by a semicircular railing that enclosed the front platform. There was a step in the rear, like that on an omnibus. When the door was closed, the step was covered, so that it was impossible to board the car while it was in motion. These were the "bob-tailed cars", in design very much resembling the omnibus, except that they had small flanged iron wheels instead of the larger wooden ones of the 'bus. However they retained the longitudinal seats of the omnibus, its rear-entrance features, and a roof still arched high in the center, to make room for the tall hats that were worn in that day.

Osgood Bradley of Worcester and John Stephenson's works in New York built the earliest of the horsecars used hereabouts. These single entrance bob-tailed cars required turntables in the street, at the end of their route, and at the car station and stables. There are people still living in Springfield, who remember the old turntables at Main and Carew streets, State and Elliott streets, State and Oak streets, and at Winchester Park.

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* Electric carbarns were built on this site in later years. The present Hooker Street bus garage (built as a car house in 1916) stands at the approximate location of the original horsecar stables.

† Later part of Main Street.

Structural changes in horsecar design soon did away with the bob-tail feature, as newer and larger cars were built to cope with traffic demands. Well before the 1880s the horsecars in use hereabouts were all of the double-end type, with the horses changing position at the end of the line, without turning the car.

Of the old turntables, only that at Main and Carew streets lasted until the electric cars came into use, since it could be used to facilitate getting cars in and out of the carbarn there. However it was too short for the double-truck cars, and was eventually taken out.

Early track construction was hardly what could be called sturdy, according to modern standards. Rails of wrought iron, thirty-three pounds in weight to the yard, were fastened to wooden stringers, with the crossties seldom if ever being laid less than two feet apart.

(What a contrast to the heaviest steel trolley rail of later days, weighing one hundred pounds and over per yard, rock ballasted, and with closely-spaced crossties, frequently steel-fabricated. In the later years, long stretches of trolley rail in city streets were frequently continuously-welded, which made for smooth running and low maintenance costs.)

Supt. F. E. King of the Springfield Street Railway, who had replaced Mr. Smith in 1873, had a reputation for being a stern and strict man. The late Joseph Work, who was one of the last horsecar drivers hereabouts, recalled having once seen Mr. King pull a driver off a car on Main Street for some rule infraction, and get aboard to take the car back to the stables himself. Yet there are people about, who still recall the beautiful floral streetcar, in miniature, which was on view at the time of Mr. King's death in 1890, in tribute to the personal esteem in which he was held.

The year 1876 had seen the first five-bench open cars put on for summer operation, in Springfield, and with their introduction came the first two-man crews on the cars,—there now being both a driver and conductor.

This year also saw the first Sunday service being given by the horsecars, as well as the abolition of the previous practice of putting the cars on runners in the winter (the city of Springfield had up to this time forbidden the removal of snow from the tracks, on the grounds that it spoiled the sleighing).

The Springfield Street Railway saw other major changes in 1876. It was at this time that John Olmsted replaced President Atwater as the company's titular head,—the latter resigning his post due to the pressure of other affairs. Olmsted, who had come to Springfield from Connecticut, was thoroughly convinced of the great possibilities of the horse railway,—as in later days, he was equally enthusiastic about the electrics,—for his administration was to span both eras. A director of the Holyoke Street Railway as well as of his own road, he was the leading power in local transportation circles hereabouts, until his death in 1905. In demeanor, "Uncle John" Olmsted is remembered as a down-to-earth, every-day sort of man, slightly stooped, and never without a cigar, which he invariably chewed

rather than smoked. He lived at the corner of Pynchon Street and what is now Columbus Avenue (then known as Water Street). In later days, his home was on Round Hill.

Another officer of the Springfield Street Railway with a record of long and notable service that encompassed both horsecar and early trolley days, was Gideon Wells, sixth cousin of the Gideon Wells who was Secretary of the Navy in Lincoln's time. Mr. Wells, who was considered one of the most able lawyers in Western Massachusetts, was Clerk of the Corporation for the Springfield Street

North From Railroad Underpass at McKnight Glen, 1890

Road to Mineral Spring at present Albany Street, Springfield.

Railway from its inception until shortly before his death in 1898. In his private practice, he had been law partner of George Ashmun, himself a man of distinction in the legal field, and whose many honors included that of having presided at the Chicago convention which was to nominate Abraham Lincoln for the presidency of the United States.

Improvements in Springfield's horse railway service went hand-in-hand with the city's physical development. In 1879, the year that the McKnight real estate boom really got under way in Springfield's Ward 5, up "on the Hill", horsecar fares were reduced from eight to seven cents, with a five-cent fare being brought within easy reach of the public for the first time, through the sale of tickets, five for twenty-five cents.*

* A sheet of 100 tickets, was sold for $5.00, although this had also been available under the old eight cent fare.

It was in this year also that the company's initial $50,000 paid-in capital was given its first boost, being doubled to $100,000. A lot on the southeast corner of Main and Carew streets was purchased, and a brick building erected which was to house company offices and equipment, with tenements upstairs and stables for the horses in the rear.

This location, incidentally, has been identified with the Springfield Street Railway during all the ensuing seventy years up to the present, and this same building, with sundry alterations from time to time, is still in active use as a bus repair shop, with operating department offices and an employees' lobby on its northerly end.

Considered percentage-wise, the Springfield Street Railway made what was by far its most generous disbursement to the stockholders in 1879, when an accumulated dividend of fifty-eight per cent was made available. Coming but a year after the company had declared its very first dividend,—a modest four per cent,—such distribution of *largesse* as is indicated by the records of 1879, appears somewhat amazing, looking backward from the perspective of nearly three-quarters of a century. However it had been largely made possible by a prior-posted guarantee fund, under the terms of which the street railway had accepted certain obligations which had now been satisfactorily fulfilled.

The early horsecar driver was a busy man. Besides having to apply the whip to his plodding steed on occasion, he had to have stout muscle for winding the hand-brake for the frequent stops, then dodge the handle to avoid being struck as it flew around again upon release. In the pre-conductor days, he was also the fare collector, and had to rely more or less upon the honesty of his passengers, who put their fares in a box up front, while he would pass their change back through a slide in the front door. Sometimes there was a small bell here, by which the driver's attention could be called to a passenger's need for change, or with which the driver could summarily call attention to the fact that somebody in back hadn't paid his fare.

He could also keep a close watch on what went into the fare-box, which was usually located just inside the end window, next to the door, and was illuminated by a tiny oil lamp.

With the advent of two-man cars, the conductors were usually equipped with a bell punch for fare collection, with fare registers being installed later (the Springfield Street Railway was using the Demarest register as early as 1885, on its horsecars).

About the most serious operating problem centered about the horse himself. At the peak of its horsecar operations, the Springfield Street Railway, the largest enterprise of its kind in this area, had two hundred eighty of them. A good animal cost $125 or so, much less than a car, which then averaged about $750; however, since the horse usually spent twenty-one hours out of twenty-four in the stable, it was necessary to have several shifts of horses for each car in operation. Thus the total investment in animals was usually greater than in the equipment.

The Springfield Street Railway bought the best of horses and gave them the best of care, but it was very important for the drivers to know how to manage them. The feet of the hard-working beasts often gave out after they had been in service for six months or so, and they had to be taken off the routes; others would remain in good shape for as long as two years.

To help get heavily-loaded cars up the hills, of which it had several to contend with, the Springfield Street Railway maintained helper or "tow-horses", as they were usually called, at State and Willow streets; the Maple Street entrance to Springfield Cemetery; and at the foot of Tubbs Hill in West Springfield (for the climb up to Mittineague). There was also a tow-horse kept at Bridge Street to help the cars up the incline to the Old Toll Bridge, and others were stationed at the foot of Rockrimmon Hill on the Chicopee line.

Mr. Herbert E. Dubois, still employed by the street railway as a foreman at the Hooker Street garage, went to work as a tow-boy in 1888. He is now one of the company's two oldest employees, with respect to continuous service. When he started work in 1888, the street railway had ten tow-boys, who worked from six o'clock in the morning until six at night. The old tow-horse stable on Willow Street, where ten animals were kept for use on the State Street and Maple Street cars, was approximately where the parking lot of the Springfield Safe Deposit & Trust Company is now located. Each horse had a whiffle-tree and chain attached, and when an up-bound car came along State Street, the tow-boy, (sometimes a colored lad), would take his horse out and hook the chain on to the "near" corner of the still-moving car, while he would swing onto the front platform beside the regular driver, for the ride up the hill.

Mules were used in place of tow-horses at the Springfield Cemetery entrance, to assist the climb up Central Street hill. Two of these mules are still well-remembered by old-timers as "Jack and Jennie", who wouldn't do a stroke of work after the noon whistle blew, until they had been fed and had a nap. If one of them got new shoes, the other had to have them too, or it would refuse to work.

Mules, which were first introduced to a limited extent on the Springfield Street Railway in 1876, were not widely used on other horse-railroads hereabouts, apparently,—although they held the advantage over horses in some respects. A survey one time disclosed the fact that two mules could be fed at the cost of feeding one horse, and that they could do a third more work as well. Moreover, they could stand the cold as well as a horse, and the heat better. One drawback, however, was the fact that the mule had little, if any, resale value when he became no longer suitable for street railway use,—while on the other hand, a horse could be sold for perhaps three-quarters of the original cost.

Daily mileage for streetcar horses ranged as a rule from ten to twenty-two, with one full day in seven for rest. Horses working on paved streets had to be re-shod as often as every three or four days; sometimes they would go for twenty days.

Inside, the early cars had a stove for at least the serious intent of keeping passengers warm in cold weather,—although at the far end of the car, the straw which was generally copiously spread out on the floor served the purpose just as well, or better.

The driver faced the elements without protection, except for his great-coat and fur-lined hat,—although it was surprising how much animal heat could reach back to him on cold days, from the plodding horse ahead.

All this for $1.60 a day,—and a day was twelve hours, and frequently fourteen or fifteen.

Early horsecar days of the Holyoke Street Railway also involved elements of interest. The company had been organized early in 1884 by William A. Chase, Charles B. Prescott, J. A. Sullivan, Hiram Smith, P. F. Goodall, W. S. Loomis, G. H. Smith and George E. Dudley, all of Holyoke, and S. G. Gaylord of South Hadley Falls. Mr. Chase was elected president. Original capitalization was $25,000.

The first line from South Hadley Falls, where the barn and stables were located, over the bridge to Holyoke, was built in the summer of 1884; five horses were acquired, at a cost of $745, and two cars were purchased from the Sixth Avenue Railway in New York City for $690.

There must have been considerable public interest in the new enterprise, for it was recorded that there were some 3,000 people on hand at the Holyoke railroad yard on August 12th, to see one of the new horsecars being unloaded.

The first cars were operated in September, over the Connecticut River bridge and down Main Street, Holyoke, as far as Dwight Street. By mid-October, the cars were running along Main as far as South Street. During this first year, it was found necessary to purchase six additional cars and twenty more horses, to handle the business.

The original two miles of track consisted merely of strips of iron, spiked to wooden timbers, without even the use of bolted plates at the rail joints. Since switches and turnouts were expensive, the usual way for two cars to pass in these early days was for one driver to place a bar across the track, purposely derailing his car, whereupon he would drive it over to one side in order to allow the other car to proceed along on the rails. Ice, sleet and snow, however, made it a tricky feat to maneuver two cars past each other in this fashion.

The intelligence of Holyoke's car horses was demonstrated by the ease with which they became accustomed to the "stagger" system of heavy and light day's work, they being assigned three round-trips one day and two the next. A former Holyoke "tow-boy" tells the story of how the ears of the horses on duty would flatten close to their heads and their spirits obviously droop, when they would reach the stable in South Hadley Falls (at the location of the more-recent Solon Block), to find that there was no relief team waiting for them, as scheduled. Sometimes sickness, or heavy traffic, would make it

necessary to work the horses three trips on successive days,—but hardly ever, we are told, did the horses get fooled.

The story has been related of one inexperienced driver who carelessly let his reins hang free approaching the stables at the end of a trip. The horses, seemingly knowing that it was the end of their two-run day, took matters unto themselves, and dragged the car off the rails and into the stable, which must have been somewhat embarrassing to the driver, when he "came to."

An incident of horsecar days in Holyoke which is worthy of note here, took place early in 1890. A high wind, sweeping down the Connecticut on January third, swept the fifth span of the South Hadley Falls bridge into the river, as workmen were in the act of hoisting it into place. Among other things, this severed the Holyoke Street Railway's horsecar line to South Hadley Falls and the company's stables. It being mid-forenoon at the time of the mishap, many more horses were to be needed to meet the heavier traffic demands later in the day. It was finally decided to bring the horses around to Holyoke by way of the old Willimansett railroad bridge, at that time owned by the Connecticut River Railroad. It is recalled that a single boy led six pairs of horses around by the shore road and across this bridge, which had but a rickety footpath, into Holyoke.

As in Springfield, there were several locations in Holyoke where tow-horses were required to help cars up steep hills. The Holyoke Street Railway maintained a wooden tow-house at Dwight and Front streets, and also used extra horses up Appleton Street hill.

One can almost picture the small sheds used for this purpose, smelling strongly of hay, with round-bellied railroad stoves, for heat, a supply of grain for the horses, and a box for the tow-boy to sit on. Oil lamps, with their concave reflectors shining at night from their wall brackets, lighted a scene where many hours of chatting and yarn-spinning were passed in the broken intervals between the handling of each "tow".

Various extensions of route were made from time to time until 1891, when the entire six and one-half mile system was electrified. At its peak of horsecar operation, the Holyoke Street Railway had eighty of these animals in their stables. In support of the tradition that this company had the best street railway horses in the state, and that they were here given the best care, it is recorded that at the time of electrification, these horses in every case brought more than their original purchase price when they were sold.

Sunday travel on the horsecars had been built up rapidly since it was decided to run the cars on the Sabbath as well as on weekdays. In Springfield, the first Sunday cars were put on in 1876; in Northampton, not until 1882. The following comments on the Northampton Street Railway's experience with Sunday cars, taken from the Hampshire *Gazette*, may be of interest at this point:

"Sunday cars began well, being first put to the service of the Lord, in transporting Elm Street people to and from church. There

was one car down to church in the morning, and another up to Vernon Street after church, and this was run on a guarantee of $3 a Sunday by the North Elm Street people, whose spirit was willing, but whose flesh was weak.

"One year, this state of things continued, and then the road began to serve the Lord still more. A combination of desires called for a car to Florence. The Baptists wanted to get certain members in *from* Florence, and Joseph Marsh and others wanted to get out to Cosmian Hall. In two years, it began to appear to the management that there was more money in serving the Devil, so it increased the trips to nine, and there has been a gradual increase since, until on a pleasant summer Sunday, more trips are run than on any other day".

To sum everything up, Supt. Clark of the Northampton road was quoted with regard to the distribution of Sunday riding. He considered that "one third is for the pleasure of the trip, while many others, who could not be distinguished, ride for pleasure at the end of their journey". It was apparently then not thought possible that anybody could conceivably have any *business* to transact on Sunday!*

* * * * * * *

"Roll on, Thou gorgeous Car of Progress—Roll,
Paw, steed; tinkle the signal bell!
Here's luck to Thee, and to the Men
Who pay the Bills.
We hope that every trip
Will have loads like the first,
But with more Money in them."

The above idyllic bit of blank verse appeared in the Pittsfield *Sun* the day following the inauguration of horsecar service by the newly-opened Pittsfield Street Railway, early in July, 1886. It was somebody's way of heralding the advent of a new transportation era in that Berkshire community. Free trips over the line had been offered by the management on that auspicious opening day, and the opportunity was enthusiastically embraced by the populace, who rode en masse. Pittsfield's first horsecar line extended out North and Wahconah streets to Pontoosuc Lake, which was a popular spot then, as it still is today. Very likely the company management breathed a collective and hopeful prayer on that opening day that would have echoed the sentiment of the enthusiastic patron quoted above. If so, their hopes were not to be in vain. There were many trials and tribulations in horse-railroad management, to be sure; but let it be said to the credit of the Pittsfield company, and the half dozen other Western Massachusetts horse railroads that had either preceded or come after it, that all were somehow able to survive the economic stresses and strains of the times, and kept the wheels of the

* This observation was made in 1895, two years after the electrics replaced the horsecars in Northampton.

little cars rolling behind their sturdy horses until the '90s, when a vehicle called the Electric Car came upon the scene, to inaugurate another new era, and to be greeted with even more enthusiastic acclaim.

But let us linger awhile with the horsecars, for there had been a lot going on.

The blizzard of 1888 began on March 12th, and lasted for two days. Horsecar lines, as well as all other usual means of transporta-

Elm Street and Court Square, Springfield, in Early Days

tion, were tied up everywhere. Springfield's experience was typical.

This great blizzard represented the first "Waterloo" for Superintendent King of the Springfield Street Railway. As the storm grew in intensity, the company's big plow was put to work, being pulled by six horses. As many as six of the straining animals were also hitched to passenger cars, in an attempt to keep them moving through the fast-accumulating snow. But it was a losing game. To quote an item in the contemporary press, "Towards noon the cars, sometimes on, sometimes off the track, bobbed up and down like ships in a stormy sea, and passengers decided to brave the tempest rather than have their brains dashed out against the roof". One after another, cars became stranded, even along Main Street, where some of them

were to remain half-buried in the drifts until well after the great blizzard was over.

It was at this time that the late "Tim" Reilly (later the company's chief inspector but then a recently-hired horsecar driver), won lasting recognition for good work—both at the Union Block fire, at which time he was able to get his horses and car safely out of danger when they were apparently trapped on Main Street; and again during the great blizzard, a few days later. On the latter occasion, Reilly was able to get his car back to the stables by the simple expedient of blocking the wheels and driving along the sidewalk, where the going was a bit better. He is said to have been the only one of the company's drivers to get his car off the street, most of the crews considering themselves lucky to be able to unhitch and lead their horses to the stables, leaving the cars where they were.

The record storm deposited thirty-six inches of snow on the level in Springfield's streets, with four of the city's eight horsecar lines being immobilized until March 18, six days after the blizzard began.

The decline of the horsecar, as the popular mode of local public transportation, was not, however, as precipitous as one might think. Although by the end of 1889, the Hoosac Valley was but one of some fifteen electric railways either in operation, under construction, or in course of conversion in the Commonwealth, the horsecars still had their adherents. The change in the trend of thought on the subject is graphically shown in the columns of the *Street Railway Journal* which in its April, 1885 issue had stated with the utmost finality that "nothing has as yet been devised in electricity which is applicable and practical as a motor for streetcars"; by June of the same year it was quoting Dr. Elijah Whitney, who, speaking at the Convention, enthusiastically exclaimed, "I cannot help believing that electricity will ultimately be used as a motive power—just as we now use steam!"—after which he asked his listeners to make allowances for the fact that he was an elderly man, carried away by an obviously illogical enthusiasm of the moment!

However, by June, 1887, the *Journal* was editorially commenting on the fact that the horse railways had "been found utterly inadequate" for the growing transportation needs in this country, and added that the cable-cars which had been in use in New York and other larger cities since 1873, were not proving to be a great deal better. By inference, at least, the electric car was the only hope.

Larger horsecars had been put in service as time went on, a few of them to be drawn by four horses.

The last extension of a horse railway route in the Springfield area was made in 1889, when a line was built from the old West Springfield carbarns up Tubbs Hill to Mittineague. The Springfield Street Railway had even then been giving consideration to the substitution of electric power if permitted to do so.

By 1890, when Western Massachusetts horse-railways had reached their peak, in terms of equipment and track mileage, there were lines

in Springfield, West Springfield, Chicopee and Chicopee Falls,—all operated by the Springfield Street Railway; a line in Pittsfield operated by the Pittsfield Street Railway; several routes in Holyoke, including the original line to South Hadley Falls, all run by the Holyoke Street Railway; a line from North Adams to Adams, operated by the Hoosac Valley Street Railway;* one between Northampton and Florence (the most venerable of them all) operated by the Northampton Street Railway; while the Woronoco Street Railway was just building its horsecar line in Westfield, extending from the carbarn and stable on North Elm Street to the Highlands. The very last such line to be constructed in Western Massachusetts was also built in Westfield several years later by the diminutive Highland Street Railway, but horsecar mileage elsewhere had shrunk materially in the meantime, as the "electrics" took over, one line after another.

It was in Westfield that the horsecar was to make a brief last stand in Western Massachusetts, with the opening of the Woronoco Street Railway there in 1891, to be followed by the Highland Street Railway, during the early summer of 1894. The Highland, although also opened as a horse railway, enjoyed franchise privileges which would have permitted the adoption of electric power later on. However the Highland was to have a brief history as an operating company, running for one summer season only over its two-mile route from Westfield proper out Western Avenue to the new Woronoco Park.

In 1895 the Highland was consolidated with the older and larger Woronoco road, under the latter's name; and following intermittent trials of the Mekarski compressed-air cars, Westfield was now to have its first electric trolleys.

Pittsfield and Holyoke had seen the last horsecars disappear from their streets in 1891; Springfield and Northampton in 1893. When the Woronoco Street Railway's last one rattled down Westfield's Elm Street in the fall of 1895, it marked the final appearance of that now-outmoded type of transit vehicle in Western Massachusetts.

For a town whose basic industry for years had been the horsewhip, the passing of the horsecars might have been expected to arouse a few nostalgic reflections here. If it did, it was hardly discernable in the Westfield contemporary press. The *Times and News Letter* was quite matter-of-fact in reporting the epoch-making change-over from horsecars to electrics. In its issue of October 23, 1895, it merely commented "Many things transpire in a week's time; and seven days hence, a horse-car on our streets will only exist in the imagination". And one might well suspect that here in this last stronghold of animal traction in Western Massachusetts, there was by 1895 more hope for what was to come, than regret over what was passing.

* This was the only line in Western Massachusetts to have been electrified prior to 1890.

Western Massachusetts Pioneers in the Field of Electric Traction

The period 1830-1860 marked the first experiments in the application of electric energy for traction purposes,—and much more of this work was done against a Western Massachusetts background than is generally known. As a matter of fact, Springfield can claim the honor of being the first place in the world in which the feasibility of electric traction was demonstrated. For it was here that Thomas Davenport, a poor blacksmith of Brandon, Vermont, exhibited a model "electric railway" in the autumn of 1835, fully a half century before the trolley car, as we have come to know it in more modern times, was to come into general use.

Davenport's leadership in this respect is not questioned in engineering circles today, although there have been numerous claimants to various subsequent refinements to his methods and designs. Davenport, quite independently of previous research, devised a rudimentary electric motor, working on the general principle of an electro-magnet by its attraction for fixed armatures or magnets,—the current being commutated at the proper time to let the poles pass the first set of armatures, and take up the work at the next. This Davenport applied to a tiny car equipped with batteries; and after six years of struggle, saw it operating around a circular track, two and one-half feet in diameter.*

After demonstrating his model in Springfield, Davenport took it to Boston where it was on exhibition for two weeks in December. He stands today as the first patentee of the electric motor (1837), as well as the first inventor to apply the principles of the electric motor to traction uses. He is said to have constructed over one hundred models of battery-operated electric motors at one time or another. Not all of his theories on the principles of propulsion turned out to be practical, but he had given the world an idea. His patents, unfortunately, were destroyed in the Patent Office fire in Washington.

Davenport's memory is honored today by a bronze plaque which adorns a homestead in his native Brandon, Vermont,—but it was Springfield, Massachusetts, that had witnessed the first real demonstration of his work.

Prof. Moses G. Farmer was to make use of much the same principles, upon a somewhat larger scale, when he built a model locomotive, powered by forty-eight pint Grove battery cells, and running on a track of eighteen-inch gauge. Carrying behind it a small car capable of accommodating two passengers, it was put on exhibition at Dover, New Hampshire, in the fall of 1847. It was advertised as an "Elegant Car" drawn by "The Lightning Steed", and was run backwards and forwards along its short track laid along the south side of the Dover Town Hall, before the awed gaze of a large crowd.

* A drawing of Davenport's early "railway" can be found on page 60 of a recent book by Louis Hertz, *Riding the Tinplate Rails* (1944).

In later experiments by others, including Thomas Hall, who exhibited a small model car at the Charitable Mechanics Fair at Boston in 1851, current was supplied to the car motor through the rails from a stationary source of energy, rather than from batteries aboard the car itself; and various others, both in America and abroad, worked along similar lines in the further development of electricity for traction purposes, prior to the installation of the first full-size electric railway to be worthy of the name, by Siemens and Halske at the Industrial Exposition at Berlin, Germany, in 1879. That, in turn, had stimulated much further activity along this line, throughout the world. However it was not until the middle of 1880 that any real practical progress in electric traction was to be made in America—at which time Western Massachusetts was to be brought to the forefront once again; for it was in that year, and at Stockbridge, Massachusetts that Stephen Dudley Field, a native of that town, made patent history once more in connection with the development of electric traction.

Very little space is given to Field and his works by many standard references, yet he had filed a history-making caveat on May 21, 1879, for his dynamo motor, and the following March he made formal application for a patent. It is a matter of official record that the New York firm of Appleton & Rice, which represented Mr. Field in a lawsuit regarding the priority of his claim, was able to establish the fact that, patent-wise, his electric motor ante-dated both that of Siemens in Germany and Edison in the United States, although the latter had done earlier experimental work here. Thus the Patent Office in Washington, after careful study of the conflicting claims of Siemens, Edison and Field, awarded patents to Field as having been the first to have entered preliminary papers relating to the application of dynamo-electric mechanism to the propulsion of cars.

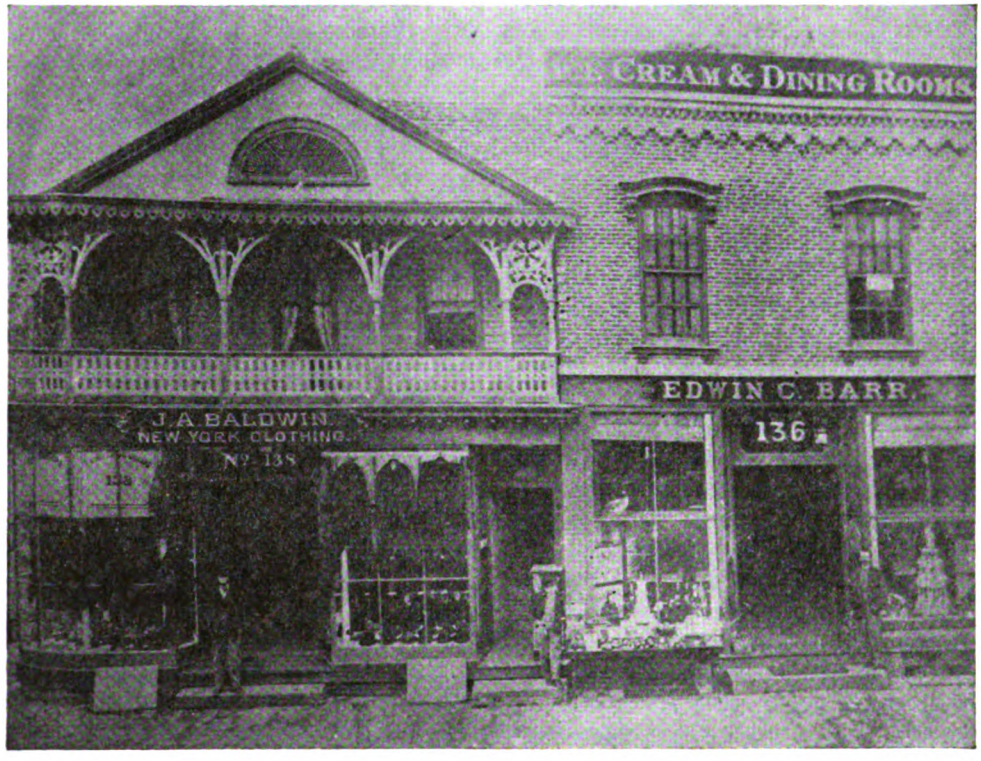
We have certainly every evidence that Field ran a "motor car",—very likely the first dynamo-propelled railway car in America upon which a man could ride,—at his native Stockbridge in 1880. This was some two years before Van DePoele's car was put on display at the Chicago Industrial Exposition of 1882-83, to operate on what a standard encyclopedia considers to have been "the first electric railway in the United States". Field's car used, with the dynamo, a positive wire enclosed in a conduit and a track-rail return.

In a recent letter to the writer, Mr. Bernard Hoffman of Stockbridge made the following interesting statements:

"When Mr. Field came back from San Francisco, he rented a house on my father's property here in Stockbridge. It was known as the McAllister house and stood on the Stockbridge main street, east of the lot on which the Mission House Museum now stands * * * Back of the house, Mr. Field had his 'shop', and included in its equipment was a vertical boiler and a steam-engine driven dynamo. Out on the lawn Mr. Field had built a short stretch of track, on which a frame, or car, was propelled by an electric motor. I can recall

seeing Mr. Field sitting on the little platform-like frame, riding back and forth. * * *"

The reaction of local townsfolk to this innovation, seems to have been one of doubt. In the *History of Stockbridge, 1739-1939,* it is stated that "with skepticism they regarded a small object four feet high and ten feet long, equipped with seats for two and a gigantic



Barr's Restaurant, a feature of the 1890s, Springfield

headlight". To inquirers, "Mr. Field explained that the current was supplied by a third rail placed between the tracks, and was taken up by a shoe fitted to the bottom of the car".

This historic little car has been preserved in the basement of the Field home in Stockbridge, which is now occupied summers by the late inventor's daughter, Miss Virginia Field. A photograph of the car can be seen at the Stockbridge Library, to which it was presented by Mr. Field's widow in 1940. Its likeness has evidently been perpetuated in still another form; for according to a recent letter to the writer from Mrs. Graham D. Wilcox, Secretary and Curator of the Stockbridge Library Association, a young engineer who was installing air-conditioning units in the library's Historical Room not long ago, spoke of the car as though he knew every detail

of it. He said he had been required to study a model of it, while a student at Rensselaer Polytechnic Institute!

Mr. Field, who had resolved his differences with Edison after a couple years of litigation, consolidated his interests with those of the latter under the name of The Electric Railway of the United States, which was organized early in May, 1883. Field, who was now to work much with Edison, shortly built an electric locomotive which was operated over the 34th Street branch of the Elevated, in New York City. His subsequent work with Eickmeyer in Yonkers, New York, and his electrification of the tramways of Geneva, Switzerland, were also notable achievements, although undertaken after the practicability of the electric motor for traction purposes had been too well demonstrated to give them the historic significance of his 1880 Stockbridge experiment, which would seem to merit more general recognition today than is usually accorded it.

The McAllister house in Stockbridge, on the grounds of which Field had laid his track in 1880, was moved to a new location on Park Street in that town, at the time that Sargeant Street was cut through. Here it still stands, silent reminder of the early efforts of a pioneer in the field of electric traction who had lived within its walls while making some of his most noteworthy contributions to the development of American industry.

Progress was to be rapid in the development of electric railway propulsion through the late 1880s. Following a season or two of exhibition elsewhere, Leo Daft brought his "Electric Railroad" to the Point of Pines near Lynn, Massachusetts, for the summer season of 1885.* Competing with the "Taking of New Orleans", "The Fall of Tripoli" and other magnificent fireworks spectacles for the public's interest, it was to be here again in the summers of 1886 and 1887, being without doubt the first electric-railway installation for public riding in New England. The line ran along the beach for the better part of a mile, from the Soda Pavilion of the Pines Hotel to the steamboat wharf. No fares were charged, since it was operated under the sponsorship of the Hotel management, as an added attraction for its patrons. Many went from Western Massachusetts to see and ride upon a crude electric car, to marvel at its wonders, and to shake their heads and say, as people say today as they witness some new and wondrous thing, "Well, well, well; and what will they think of next!"

Many others from this area presumably visited the 1887 Industrial Exhibition at Worcester, which was opened on Monday evening, March fourteenth, by Governor Oliver Ames, who with his suite, the members of the Worcester City Council and other dignitaries, were

* In 1884, following successful trials of his 12-ton, third-rail locomotive "Ampere" the year before, at Mt. McGregor, near Saratoga, N. Y., Leo Daft had built an "electric railway" on one of the piers at Coney Island, N. Y., using the track rails as the current conductors. This was later demonstrated at the New Orleans Cotton Centennial in the winter of 1884-85, after which it was brought north again, and put in operation at the Point of Pines, at that time the location of the largest summer hotel on the New England coast.

given an official ride on the electric car that the same Leo Daft had placed on a track laid along the north side of the spacious Worcester Rink building, where the exhibition was held. Hundreds were to ride on the line during the days that followed. After running for six weeks, the exhibition was closed on April thirtieth, bringing to an end what had been one of the most interesting displays of "new-fangled gadgets" to be brought before the public; besides the little electric car, it had included the demonstration of Edison's phonograph, a chalk telephone line, and three makes of incandescent electric lights, distributed around the rink in brilliant profusion. It must have been apparent that "The Electrical Age" was about to dawn—for there were many people in attendance who had never seen these things before.

The year 1887 also saw the first commercial application being made of electric traction in New England, when Frank J. Sprague put in an electric freight railway at the East Boston sugar refinery, fed through an overhead wire from a lighting dynamo.

The installations of Sprague, who had begun his experimental work at the Norfolk (Virginia) Naval Torpedo Station in 1881, indicated a growing trend toward the adoption of overhead power conductors. Most of the earlier experiments had made use of storage batteries, third-rail conductors or underground conduits. However Sprague was not alone in exploring the possibilities of this type of power supply. There was Van DePoele, who had introduced the first practical overhead system, as we have known it in more recent years, on a line in the suburbs of Kansas City in 1884, employing an under-running "trolley" mechanism, suspended from the overhead wire; the so-called "systems" of Stark and Daft were also based on this essential deviation from previous practice; while Elihu Thomson and E. J. Houston were by 1887 working along similar lines here in Massachusetts, and were soon to achieve notable success, as Frank Sprague's leading competitors in a fast-growing industry.

Following the initial success that had attended the operation of Leo Daft's "electric railroad" at the Point of Pines and the Worcester Exhibition, a line of poles was erected along the then-steam-operated route of the Worcester & Shrewsbury Railroad, over which Daft operated his electric car on experimental runs in the early summer of 1887. At that time it was the nearest approach to full-scale electric railway operation that had been seen in New England, and was the forerunner of various similar installations; however it remained for the enterprising Thomson and Houston, through their interest in the Lynn & Boston Railroad, to activate upon the latter's tracks the first commercially-operated passenger-carrying electric car line in Massachusetts. It was opened for service at Revere Beach on July 3, 1888, using converted Lynn & Boston horsecars at first. The line operated all summer along Ocean Avenue from the Atlantic House at the corner of Revere Street south to the Boston, Revere Beach & Lynn Depot, a distance of about three-quarters of a mile. Although shortly to be followed by others, it was the first trolley

line in the state to charge its passengers a stipulated fare, and to operate on a regular schedule.

The Thomson-Houston Electric Light Company had, as a matter of fact, been conducting experiments in the field of electric traction at its West Lynn plant since 1887. The phenomenal success of Sprague's installation on the Union Passenger Railway at Richmond, Virginia, in January, 1888, had virtually assured the future success of the trolley car, and the race was on.

The Thomson-Houston Company absorbed Van DePoele's interests during the year, and expanded the scope of their experimental operations accordingly. Thomson-Houston equipment was similar to Sprague's, and included two double-reduction geared motors per car. A distinguishing feature of their system was an excellent controller for parallel (later series-parallel) operation, in which a magnetic blow-out devised by Elihu Thomson was used.

From time to time, the Thomson-Houston Company was acquiring an interest in various existing horse railroads, upon which it felt that further experimental work could profitably be conducted. Most of these lines were in the eastern part of the state; however in May of 1888, Thomson-Houston, with a North Adams syndicate, secured control of the Hoosac Valley Street Railway, at that time operated with horses, and made plans to convert to electricity. Poles were set in Main and State streets, North Adams, in June, 1889, a power house was built at Zylonite, and experimental electric operation conducted along the Hoosac Valley's line between that point and Adams, through the summer and early fall of that year. When, on October 15, 1889, a regular passenger trolley service was inaugurated between North Adams and the Boston and Albany Railroad crossing at Adams, it marked the first scheduled appearance of an electric streetcar in the western part of the Commonwealth. But there were others soon to come. The Trolley Era was on its way, and by another year or two, the electric car had quite ceased to be a novelty.

The Thomson-Houston Electric Company, in consolidation with the Edison Company in 1892, became the present General Electric Company, and their former West Lynn plant became the nucleus of the vast "G.E." with its busy plants at Schenectady, Lynn, Pittsfield and other cities.

Frank Sprague's interests were likewise merged with those of the General Electric in later years. Significantly, the name of Sprague,—who has often been called "The Father of Electric Traction" because of his success in placing it upon a sound commercial basis in this country,—is kept alive today in the industrial life of North Adams, Massachusetts, where the tall smokestack of the Sprague Electric Company pierces the skyline of the town that saw the introduction of the first experimental trolley car in Western Massachusetts; as well as the *last* electric railroading operation of any kind in the same area, fifty-seven years later, when the Boston & Maine did away with its Hoosac Tunnel "Electric Zone".

The Electric Railway Comes of Age

The adoption of electricity as a substitute for horse propulsion had been under consideration by the Springfield Street Railway, the largest local transportation company in Western Massachusetts, since 1887, at which time the so-called "system" of Leo Daft was being favored. However, it was not until the following year that the Springfield Street Railway filed a petition to be allowed to use electricity as a means of propulsion. This petition was vigorously opposed by the telephone company, on the grounds that such use of electric power by the street railway would seriously interfere with telephonic transmission.

It was to be late in the year 1889 before the Springfield Street Railway, despite the continuing opposition of the telephone company, was granted permission to extend its tracks south from Mill and Locust streets to Forest Park, and to use electric power for operation of cars on the new line. The Springfield company had by that time decided in favor of the adoption of the Thomson-Houston overhead system such as had been previously installed on the Hoosac Valley road. As the Hoosac Valley had no grades of consequence, the Springfield installation was considered as a much better test of the possibilities of electric traction, since the latter would involve some fairly steep grades.

Springfield's first electric cars were assembled in a small building on the south side of Bond Street, near Main. The shiny new car bodies came from their Newburyport builders to be mounted here on Springfield-built Bemis trucks. According to the late George M. Stebbins, former Springfield City Marshal, who remembered them well, the very first electric cars in Springfield were numbered 73, 74, 75 and 76, had the words "Forest Park" emblazoned in gold-leaf on their dash, with "Long Hill" in white letters along the sides.

Following preliminary tests, Mayor Bradford and a sizeable delegation of city notables rode Springfield's first officially-operated electric car from Main and Bliss streets to Forest Park on the afternoon of June 6, 1890, with "Tim" Reilly standing proudly at the controls. The line was opened to public travel the following day.

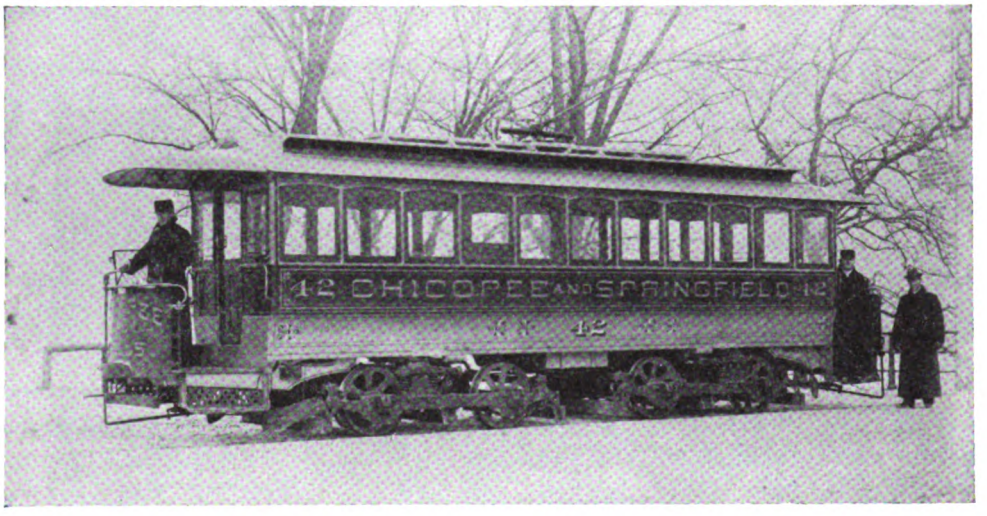
At the outset, the electric cars had to be towed by horses from the Carew Street barns down Main to Bliss Street, which was as far north as the overhead wires extended at first. With horsecars on the "Green Line" still operating south to Mill River, over half of the original two and one-half mile electrified line was used by both horse and electric cars for some time.

Further capital structure adjustments to care for the Springfield Street Railway's increasing investment in plant and equipment, were now in order. In June, 1890, the company's capital stock, which had been increased to $350,000 the year before, was again boosted, this time to $400,000.

Basic fares were also changed in 1890, from six to five cents. For eleven years past, the five-cent fare had only been within the

reach of the public through the purchase of tickets which sold at five for twenty-five cents.

As we have seen, the construction of Springfield's first electric car line had been intended to provide convenient transportation to Forest Park, destined in future years to become one of the most beautiful city parks in the country. However it was then only in the early process of development. As the several extensions of the horsecar lines had aided materially in the building-up of the McKnight district a decade earlier, the coming of the electric car was to play



Electric Car of the early Nineties made by combining two Horsecars

a leading part in the development of the Forest Park district as a residential community.

A small carbarn was erected at the end of the line on Sumner Avenue just east of the park entrance, and here the early electrics were housed. The building remained for some thirty years on this site. In 1920 the property was purchased from the street-railway by the trustees of Trinity Methodist Church, shortly after which construction work on the present magnificent edifice got under way.

The general adoption of electric power by the street railway, except on the Maple Street line and the route over the old Toll Bridge to West Springfield, was authorized by the Springfield Board of Aldermen on December 7, 1890,—the Maple Street permit having been held up pending decision as to the possible rerouting of the line.

Electrification of the various lines was rapidly effected, until January 9, 1893, when the last Springfield Street Railway horsecar rattled over the long-familiar route from Main and Bridge streets over the old covered Toll Bridge to West Springfield.

There were some to regret its passing, as there had been many to hail the first West Springfield electric car, which came over the

North End bridge and passed down through Merrick a little after 11 A. M. that same day. The Springfield *Republican* stated in its columns the following morning that "it seemed like the passing away of old landmarks when the last four horses were led down Main Street (West Springfield) and over to this city shortly after 4 o'clock in the afternoon". Sale of these animals was promptly effected through C. P. Gilson, auctioneer, among the thirty head of street railway horses that had been in use on the West Springfield line for a year past,—and a transportation era was over in Springfield.

One of the picturesque legacies that the horsecar era in Springfield passed on to its successor, the trolley, was the interesting color system used in the painting of the cars.

Every horsecar line of the Springfield Street Railway in the 1880s could be readily identified by the colors of the cars that ran on it. The company continued to use this system up until, and well after, the electric cars were put on. As a matter of fact, the custom came into its most widespread usage with the opening of the newly-built Indian Orchard and Tatham trolley lines in the '90s.

The basic color system was as follows:

State Street line: yellow
Maple Street line: red
Walnut and King streets: white
Worthington Street line: white
St. James Avenue: blue
Chicopee Falls via Chicopee: green
West Springfield: orange
*Indian Orchard: brown
*Tatham: Scotch plaid

The Springfield practice of painting cars according to this variable color pattern was finally discontinued by the late '90s, by which time the cars were being used so interchangeably on the various routes, that what once had been an effective system of identification, had virtually lost all significance.

But one term still survives in common parlance today, that owes its origin to the system of car colors used over a half century ago. Even in these days of sleek new buses, the Forest Park-Chicopee Falls route is referred to as "The Green Line", as it had been throughout the days of the streetcar. There are doubtless many who now use the term who have no knowledge of its historic background,—although the green-and-cream buses that one sees on the route today are, after these many years, giving "The Green Line" actual significance once more.

Some of the earlier electric cars were converted from horsecars; similarly, the first double-truck electrics to be put in service in Springfield were the result of splicing two single-truck horsecar bodies into one, a not-uncommon American practice in the early '90s.

* Used on electric cars only, as horse cars never ran on these routes.

All of the earliest electric cars used hereabouts had open end platforms, protected by gates of wire mesh, of which the Cheney Bigelow Wire Works of Springfield supplied a great many. In 1897, however, a new Massachusetts statute required the installation of enclosed end-platforms, after which the trolley motorman was to be afforded a measure of much-needed protection against the elements.

With the appearance of the Consolidated Electric Car Heater in the railway supply field in 1892, there had also been major improvements effected in the interior heating of street cars. By 1895, the Massachusetts Railroad Commissioners were requiring the installation of electric heaters on all trolley cars not already furnished with coal stoves. The latter, incidentally, were surprisingly efficient, in some cases, and coal-fired heating units were effectively used on the Connecticut Valley road's electric cars up until the end.

The harassed motorman was given further aid and comfort with the development of the air-brake for street-railway use in the later '90s, at which time the first newly-built double truck electric-cars were also introduced here.

The hand-brake remained on the later cars only as a supplemental braking medium, although there were some of the older single-truck cars still in service as late as the 1920s, in which the "stem-winding" hand-brake was the only appliance for bringing the car to a stop.

By 1895 lingering doubts and fears regarding supposed dangers of the electric car were rapidly being dispelled. Earlier, there had been many such warnings as leaving one's watch at home when going for a trolley ride, for fear of the car's magnetic effect upon its works. Many people were reluctant to ride just on general principles, in the early days.

When the Holyoke Street Railway's first electrics began operation in that city in August, 1891, it is said that no one could be induced to ride up Dwight Street hill on the initial trip. The car, in charge of motorman Walter Jenney and conductor Jesse L. Bliss, went up the hill without passengers, and equally without incident, and proceeded on to Northampton Street, where a number of persons, taking heart at the apparent successful operation of this "new-fangled contraption", were on hand to ride on the return trip to Canal Street.

This time, however, with its goodly load, the car saw fit to leave the rails near the carbarn, and its passengers watched with chagrin as one of the company's old horsecars came creaking along, and the usual iron derailing bar was laid down by its complacent crew, to permit the horsecar to go bouncing off the track and around the crippled electric, and continue on its but briefly delayed journey.

We should not leave the early 1890s without some mention of another method of street car propulsion that found brief favor in a few well-scattered American cities and towns, of which Westfield, Massachusetts, was the smallest in population.

Westfield, where ninety-nine per cent of the world's horse-whip manufacturing was once conducted, was appropriately enough still

strictly a "horsecar town" when it came into the transportation limelight in connection with the experimental operation of street cars propelled by compressed-air in 1894-95.

It was Addison Rand, at that time head of the Rand Drill Company of New York,* and his associate, George E. Whipple, who brought about the introduction of this European-developed traction system to their native town of Westfield in the spring of 1894, for experimental operation over the horsecar tracks of the Woronoco Street Railway.

Rand, through the very nature of his business, was interested in the application of compressed-air power in various fields of industrial activity. In a traction sense, his interest in exploring the possibilities of compressed-air may have been stimulated by the $50,000 prize currently being offered by a leading New York City company for a method of street car propulsion which would do away with the need for overhead electric wires.

Actually, compressed-air traction had certain advantages over the electric cars of that early day, particularly with respect to the conversion of existing horse railways. Operating mechanism was simple, and employees could be readily trained in its use and maintenance. With no overhead wires, cables or special trackwork, little if any increase in capitalization of existing companies would be necessary. The so-called Mekarski compressed-air system, which had attracted the interest of Mr. Rand and his associates to the point that they had organized a new company to introduce it in the United States, had been in successful use in France since 1876. Mekarski's system involved the reheating of hot water and the use of the evaporated water at high temperatures with the air. The cars that were brought to Westfield had air cylinders under the floor, with a small boiler on the front platform. An air compressor had been brought from Chicago at Rand's direction, and a charging station set up at the blacksmith shop of the Woronoco Street Railway on North Elm Street, adjoining the old brick carbarn structure which still stands there today. Operation of the compressed-air cars began late in May, 1894, over the Woronoco's tracks, under an agreement whereby the latter road was to be free of all cost or obligation in connection with their use.

During the next few months, while the compressed-air cars ran intermittently on Westfield's streets, they attracted wide attention from traction officials, who came from New York, Baltimore and other Eastern cities to watch their performance; while the experts who came from France to supervise their installation and early operation, lent a certain Continental touch to Westfield's traction system at this time.

Old timers still living in Westfield today recall "the wind cars" as they were often called, with mixed feelings. It appears that breakdowns were frequent; and on at least one occasion, a connecting pipe gave way while one of the cars was half way up Pine Hill, and the

* It was through the merger of this company and the Ingersoll-Sergeant Company in 1906, that the great Ingersoll-Rand organization was formed.

car rolled back down Court Street to Washington Street before it could be brought to a stop.

An employee of the Mekarski-American company was killed in a distressing accident while moving a car out of the carbarn; and at least one other was badly scalded by escaping steam while engaged in charging a car for its run.

One Westfield resident recalls that he was driving along North Elm Street near the railroad station one time and was about to pass one of these cars, which blew out its air in starting up, causing a sudden swirl of dust from the street,—and the first thing he knew, his frightened horse had bolted with his carriage, to land practically up on the front porch of the nearby Foster House.

Improvements in operation were effected as time went on, but the greatest disadvantage of the compressed-air car continued to be its limited range of use without recharging. A round trip to Woronoco Park over the tracks of the Woronoco and Highland companies, in which two trailer cars were hauled, and after which two hundred fifty pounds pressure still remained in the tanks upon the return to the carbarn, represented the best performance in Westfield. This came, however, after public sentiment had begun to shift strongly towards the adoption of electric power, even in Westfield where people had waited patiently for compressed-air to "show its stuff". As a matter of fact, if the electric car had not been making such rapid strides in development by 1895, the "air cars" might have fared much better competitively. As it was, their American introduction came a little late. Outside of Westfield, they were to see use only in New York City, Chicago, Toledo, Ohio and Rome, New York.

Although the compressed-air people made a strong bid for support in Westfield, in the course of which local investors subscribed heavily towards the activation of a new $250,000 company, they finally lost out in the decision of the newly-merged Woronoco-Highland management to adopt electric power in replacing Westfield's horse railway system.

By the summer of 1895 the compressed-air cars were gone from Westfield, and their like had entirely disappeared from American city streets a few years later. Although little remembered today, they represented an interesting experiment in public transport, which had it been undertaken here a little earlier, and more actively promoted, might have profoundly affected the trend of development in American traction.

This is perhaps as good a time as any to call attention to other leading promoters of Western Massachusetts street railway enterprises in the "pre-New Haven" days.

It is interesting to note how much New York and Boston capital had been invested in new street railway ventures in Western Massachusetts from the 1860s on. As we have seen, it was New York money that got the original horse railway in Northampton built in 1866. Charles D. Haines and George W. Stetson, also of New York, were the original promoters of the Hoosac Valley Street Railway as a

horsecar road. Haines also promoted the Chicopee Street Railway in 1887, but Springfield's fast-growing horse railway bought them out before they got it started.

The original Pittsfield Street Railway was financed largely with Boston capital, with Thaddeus Clapp of Pittsfield, its first president. Following its reorganization and electrification, control of the property passed into the hands of two brothers, Patrick H. and Peter C. Dolan of New Britain, Connecticut, who assumed its active management in 1892.

The Dolans held supervision over the property for eighteen years. A series of unfortunate accidents, culminating in the Gaffney's Bridge wreck early in 1910, on the line between Dalton and Hinsdale, proved ruinous. On February 13, 1910, a Pittsfield deputy sheriff served an injunction upon the treasurer of the Pittsfield Electric Street Railway, restraining the company from further operation of its cars until the Pittsfield Board of Alderman saw fit to again permit it. Soon afterwards, the Berkshire Street Railway acquired the property, and the Dolan regime was over, with the New Haven Railroad now in direct control of all trolley operations in the Berkshire area.

Harry L. Pierce and his Pierce Construction Company of Leominster, was the first medium for street railway promotion and construction in the Greenfield area, back in the nineties. John A. Taggart, Daniel P. Abercrombie, Jr., and Charles W. Clapp organized the Bay State Construction Company in the summer of 1899, built the trolley line from Lake Pleasant to Montague Village, and were prominently identified with the successive street railway enterprises in Franklin County from that time on.

Also prominently identified with street railway construction and management in the Connecticut Valley were Edward C. Crosby of Brattleboro, Vermont, in affiliation with Marcus A. Coolidge of Fitchburg. Mr. Crosby, who had defied a spirited opposition, including that of the famed Rudyard Kipling*, in getting his Brattleboro Street Railroad under way in 1895, was shortly to interest himself in the promotion of similar ventures further south, in the Greenfield-Deerfield-Northampton area of Massachusetts. By not-too-many years later, he was one of the trustees of the Massachusetts Consolidated trolley system, as well as a director of the component Connecticut Valley, Northern Massachusetts and Concord, Maynard & Hudson roads.

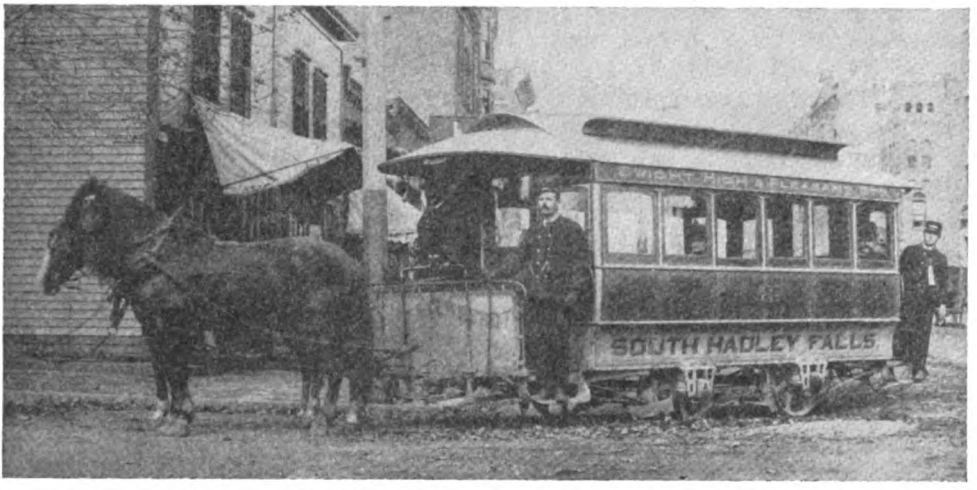
Then there was Ralph Gillett of Westfield, who had won his spurs as a transportation system organizer at the time of the Highland-Woronoco merger in his home town, in 1895. Gillett went on to bigger things, getting the Berkshire road under way in 1901-02 in Pittsfield, and the Western Massachusetts Street Railway between Westfield and Huntington in 1905. With a rare gift for organization, he found

* Mr. Kipling spent several years in America in the 1890s, residing in a modest cottage which he purchased on the outskirts of Brattleboro, and where he wrote some of his best-known works.

himself in the inner circle of the New Haven Railroad's policy-makers, and was a confidant of the great and the near-great until his untimely death in 1913, at the age of forty-eight.

In 1901 the Boston brokerage firm of Tucker & Anthony, having just successfully engineered the construction of the Norfolk Western Street Railway between Dedham and Medfield, in the eastern part of Massachusetts, turned their attention to street railway promotion in the Connecticut Valley.

Having acquired control of the original Enfield & Longmeadow road, they reorganized it as the Hartford & Springfield Street Rail-



High and Appleton Streets, Holyoke, about 1890

way, and proceeded, through the National Railway Construction Company, to underwrite the extension of the road south from Warehouse Point to a connection with what was then the Hartford Street Railway (later the Connecticut Company), at East Windsor Hill. Further extensions and acquisitions were made shortly, including a branch from Thompsonville to Somers, and a line from Suffield down the "west side" through Windsor Locks to Windsor, for another Hartford connection. From 1901 on, by virtue of operating agreement with the Springfield Street Railway, through-cars were operated by this road between Hartford and Springfield on the "east side" line, and from 1905, on the "west side" line as well.

First president of the Hartford & Springfield Street Railway was Philip Saltonstall of the Tucker & Anthony firm, and uncle of Leverett Saltonstall, one-time Governor of Massachusetts and present United States Senator.

Although operating between two cities of well over 100,000 population each, located barely over twenty-five miles apart, and with a rich and well-populated suburban territory in between, the Hartford & Springfield was singularly disappointing as a money maker,

although it owned excellent equipment, with which it gave adequate service for the most part. However, nearly a third of its active operating days were to be spent in the hands of a receiver, and it eventually went out of business, with an accumulated deficit of nearly half a million.

Tucker & Anthony also undertook the promotion of the Hampshire & Worcester Street Railway, following the building of the Hartford & Springfield road.

Although the firm had considerable experience in the traction field in the eastern part of the state, in New Hampshire and elsewhere, these were its only two ventures of this nature in the Western Massachusetts area.

The Holyoke Street Railway was, and is today, probably the best example of local planning, construction and insular management to be found in the transit field in Western Massachusetts.* Since the first horsecar rattled over the Connecticut River bridge from South Hadley Falls to Dwight Street, Holyoke, in September, 1884, the company has had but four presidents,—all home, or near-home products. The first was William A. Chase, who was replaced by Levi Perkins in 1888, and he in turn by William S. Loomis in 1896. Upon the death of Mr. Loomis in 1914, his place was taken by Louis D. Pellissier, who is president of the company today. "L. D." as he is known to everyone, is one of the best known old-time street railway men in New England. When he came to work for the Holyoke Street Railway fifty-six years ago, his pay was $6.40 a week, which is considerably less than one of his bus operators now earns in an eight-hour day. "L. D." had had many honors, including the presidency of the American Electric Railway Association. He heads today a company of which he may well be proud,—and of which he is the oldest employee, as well as chief executive officer.

By 1896 the Springfield Street Railway had connections with the Holyoke Street Railway on the north, and the Enfield & Longmeadow Street Railway on the south; five-cent fares were charged on all local Springfield lines, although the through fare to Holyoke was ten cents, and it cost fifteen cents to ride from Springfield to Warehouse Point, Connecticut, including the two five-cent fares charged on the Enfield & Longmeadow road. However you could travel through from Indian Orchard (Ludlow Bridge) to Chicopee and Chicopee Falls by way of Springfield for a single five-cent fare, although the trip took an hour and a half. But nobody minded that. It was twelve miles for a nickel just the same—which meant a lot back in the days when the favorite family relaxation was a summer evening's trolley ride.

Business tycoons of these days rode the trolleys with everybody else, and frequently with the most democratic grace.

* Not too many years ago, it was estimated that approximately 92% of the total amount of capital investment in the Holyoke Street Railway had been made by people who resided within 35 miles of Holyoke—most of them being residents of the communities served or employees of the company.

Old-timers still living in Springfield recall how Mr. Daniel B. Wesson, one of the city's most wealthy and influential citizens, performed such a daily ritual with dignity and finesse. Mr. Wesson rode the Maple Street trolley from his residence down to the bank every morning. As he got aboard, he invariably nodded gravely to the motorman, with a crisp "good morning", to be similarly greeted in return. The conductor was likewise formally recognized; and regardless of how much or how little of it he may have read in the meantime, Mr. Wesson made it his custom to hand his morning newspaper to the conductor as he left the car, to be properly thanked in return. Here was *noblesse oblige* at its best.

The electric railway industry hereabouts was now on the threshold of a busy decade of independently-promoted development and expansion. Where the horse railways had been confined to the larger towns, and for the most part isolated from each other, the coming of the electrics was followed by much new construction into suburban areas, and extensions between towns which were to link these lines together, one by one. The probing steel fingers of new trolley lines were now reaching out in all directions.

Westfield, the last stand of animal traction in Western Massachusetts, saw its last horsecar vanish from the streets in October, 1895, following a brilliant corporate *coup d'etat* in which Ralph Gillett's younger, smaller but more virile Highland Street Railway engineered a smart merger with the larger Woronoco road on its (the Highland's) own terms. The conservative Westfield *Times and News Letter* had taken note of the coming electrification of its two horse railroads, and of the many new trolley lines being built or planned elsewhere in Western Massachusetts, including Franklin County, which had never even had a horse railway, and was finally moved to an exultant tribute to progress. "The Electric Spark Has Been Ignited!" was what it said, with apocalyptic finality, back there in the summer of 1895,—and truly so, for things were never to be quite the same after that.

When the Springfield and Holyoke trolley systems were joined together at Riley Brook (the Holyoke-West Springfield town line), in July, 1895, the first real interurban line in the western counties was "born". It proved a strong stimulant to inter-city travel from the start.* When President McKinley came to Springfield in the early summer of 1899, he and his party visited the summit of Mt. Tom by cable car; and in company with Governor Roger Wolcott of Massachusetts, he attended the commencement exercises at Mt. Holyoke College where his niece was graduating,—traveling to South Hadley Center and back aboard the Springfield Street Railway's new parlor car "Rockrimmon" with the late John McDonnell as Holyoke Street Railway pilot, and "Tim" Reilly, by that time the Springfield Street Railway's chief motorman, proudly at the controls. Reilly always

* It was also the last such to give way to buses, forty-two years later.

treasured the ten dollar gold piece that the President gave him upon that great occasion.*

Adoption of the free-transfer system in Springfield in 1899, proved a great boon to the trolley-riding public,—and represented a triumph for the Springfield *Daily News* which had been agitating on the issue for some time.

In December, 1899, the Woronoco Street Railway, which had extended its line eastward toward a connection with the Springfield Street Railway at Tatham, began running its electric cars from Westfield as far as "Klondike", at the foot of Tatham Hill; and by early

Hill at Locust Street, Springfield, 1880

in 1900 track connections had been made and trolley passengers were able to travel through from Westfield to Springfield without changing cars, over the trackage of the two companies.

The Pittsfield Electric Street Railway had in 1891 put on its first electric cars between Park Square and Pontoosuc Lake, over just about the same route as its predecessor had inaugurated horsecar service five years before.

All went well until 1902, when competition hit the growing Pittsfield Electric Street Railway like a bolt of lightning out of a clear sky, with the advent of the Berkshire road. Ralph D. Gillett had come from his native Westfield to Pittsfield to become associated with Thomas D. Peck in the Peck Textile Mills (later the Berkshire Woolen Mills), in Peck's Road. Mr. Gillett, incensed over the refusal of the Pittsfield Electric to build a branch line out to the Peck mills, decided to start a company of his own. Thus came the Berkshire Street Railway, capitalized at $2,000,000, and prepared to do great things.

There promptly ensued a mad race between the two rival companies for the first trolley line into Cheshire. The Berkshire won, but the Pittsfield Electric got the first connection with the Hoosac

* Mr. Reilly passed away in 1931, after forty-five years' service with the Springfield Street Railway, in later years as chief inspector.

Valley Street Railway's line at Cheshire Town Hall, and thus the first "entry" into North Adams.*

It was Gillett, however, who had won his spurs as a successful traction promoter earlier in Westfield, who won out in the end. By 1910 not only the Pittsfield Electric, but the Hoosac Valley road as well, was within the controlled orbit of his younger Berkshire system, with the now financially-interested New Haven Railroad giving its blessing to the deal.

This brings us to the period of the real beginning of the trolley network, through which all of the street railways in the western Massachusetts counties, with one exception, were consolidated into a few major groupings,—most of them dominated by the New Haven Railroad.

By 1905 the trolleys had become sharply competitive to the steam railroads in many respects, and it is hardly surprising that the latter felt provoked to action. The New Haven was to take the lead in this respect, buying up numerous street railway properties in this region.

The first major impact of the New Haven's growing influence in street railway matters in Western Massachusetts, was to be felt in the Springfield area early in 1905, when the New Haven secured control of the Springfield Street Railway. The Springfield company had been under the guiding hand of President John Olmsted for twenty-nine years, had flourished under intelligent, progressive local management, and consistently made money for its stockholders. With the death of President Olmsted in 1905, and acquisition of the property by the New Haven-owned Consolidated Railway Company, Springfield was to lose local ownership of its trolley system for the next thirty years.

With the concentration of trolley line expansion into fewer but financially stronger hands, strenuous inter-company rivalry was now to crop up in some areas. About 1906 the New Haven sensed efforts of promoter E. P. Shaw and his Boston & Worcester Street Railway to extend southwest from Worcester to encroach upon Connecticut territory. The New Haven promptly acquired control of the newly-organized, Boston & Worcester-financed Hartford & Worcester Street Railway, which had been projected from Worcester to Hartford to give the Boston & Worcester system a through interurban trolley line from Boston into central Connecticut.

A mere two miles of the new Hartford & Worcester road had been constructed when the New Haven took control, and turned it over to one of its own operating subsidiaries, the Worcester & Southbridge Street Railway. This two miles of road, which extended from the end of the Worcester & Southbridge tracks at Fiskdale to the Brimfield-Sturbridge town line, was now to be diverted to a new purpose,—for a through Worcester-Springfield trolley line was now under consideration.

* At this time, it was hoped that the Berkshire Northern Street Railway would be built east from Troy, N. Y., to a connection with the Hoosac Valley Road towards effecting a through trolley route from the Albany-Troy area to North Adams and Pittsfield.

The completed fragment of the ambitiously-conceived Hartford & Worcester road thus became an integral part of the new trolley line from Worcester to Springfield, which was opened to travel in July, 1907.

The inauguration of the Worcester-Springfield through line, opened new vistas to the trolley-riding public. For the first time, it was now possible to travel between these two cities by trolley without change (the older route by way of Ware had involved, at best, changing cars at Spencer, West Brookfield, Ware and Palmer, since several independent companies were involved). The new through line was to be operated jointly by two New Haven-controlled roads, the Springfield Street Railway and the Worcester Consolidated (which latter had gathered into its corporate fold the earlier Worcester & Southbridge road in 1911). For the twenty years it was in use, this fifty-eight mile route, threading its way through Palmer, Brimfield, Fiskdale, Southbridge, Charlton, Oxford, Auburn and the woods and fields of southern Hampden and Worcester counties, was the longest regularly-operated interurban trolley line ever to run in New England.

A flourishing trolley express business, which owed much to the rapidly-spreading network of interurban lines under the guiding hand of the New Haven Railroad, was now getting under way. A skeptical Massachusetts Railroad Commission had previously denied permits for inauguration of such service by the Springfield Street Railway, which had petitioned for express-carrying privileges since the New Haven had assumed its control in 1905. However, the organization of the New Haven-sponsored Electric Express Company in 1907 was given official blessing to pave the way for the introduction of this type of service hereabouts. From a most modest beginning, trolley express had become an enterprise of major proportions by the time the operations of the Electric Express Company, as such, were taken over in 1913 by the Springfield, Worcester Consolidated, and other New Haven-controlled street railways in Massachusetts, which thereupon set up their own individual, but thoroughly integrated, trolley express departments.

Major credit for the expansion of trolley freight and express services hereabouts, is due to the enterprise and untiring zeal of the late Clark V. Wood, who had come to the Springfield Street Railway in 1906. As its first traffic manager in the company's new downtown offices in what was then the Massachusetts Mutual Building at Main and State streets, Mr. Wood also directed passenger publicity and promotional activities for the Springfield and its affiliated companies, which met with marked success. An annual descriptive booklet, *From the Mountains to the Sea*, complete with timetables and tariffs of connecting lines, had become a highly-prized publication among trolley travelers by 1910. Two years later, the Springfield Street Railway was one of the eight companies that got together to issue a combined passenger tariff for the sale of through Boston-New York tickets at $3.75.

In 1915 Mr. Wood assumed the presidency of the Springfield Street Railway, and in 1919 also became president of the New England Investment and Security Company, which was then the controlling medium for the administration of most of the New Haven Railroad's far-flung trolley properties in Massachusetts, stretching from Springfield to Worcester, Milford and the Attleboros. Mr. Wood was to continue to serve, with singular skill and devotion, as executive head of these properties for the next decade,* during which time traffic and gross revenues rose to new all-time peaks.

Union organization did much to improve working conditions of Western Massachusetts streetcar men, starting shortly after the turn of the century. Two dollars a day had been a standard wage for platform men for years, whether they worked twelve hours a day or fifteen (as they often did).

The Amalgamated Association of Street Railway Employees, with headquarters in Detroit, Michigan, established its Local Division Number 448 in Springfield in January, 1907, to give Western Massachusetts its first taste of a street railway employees' united front along the lines of industrial relations.

The Springfield Street Railway, incidentally, was one of the last major traction companies in the country to give up the system of a daily wage in paying its platform crews, the change to the hourly rate as a basis for such compensation only having been made on this property about thirty years ago.

It is interesting to note that present *hourly* rates for bus drivers now closely approach the average *daily* wage of the horsecar era, on the various remaining transit properties hereabouts. Virtually all of these employees now enjoy national union affiliation. Other major benefits in recent years include guaranteed minimum day's pay; a shorter work week, varying from forty to forty-eight hours; insurance, sick benefits and pensions,—all of which were far beyond the trolleyman's fondest hopes in the nineties.

* * * * * * *

The street railways of Western Massachusetts could boast of no high-speed operation to compare with the famed Boston & Worcester "Air Line" or other fast interurbans, but with respect to the comforts and appointments of their equipment, at least the Berkshire and Springfield systems, with their deluxe parlor cars, had something outstanding to offer.

The Springfield Street Railway's "Rockrimmon", which went into service in 1896, had wide curtained windows and wicker chairs instead of the conventional seats. The "Rockrimmon" was also equipped with air-brakes, and had four motors instead of two,—both of these features being rare novelties in 1896. For years the car was the "pet" of T. J. Reilly, the company's chief motorman. Fred Judd

* Mr. Wood resigned in August, 1932, bringing to an end fifty-one years of transportation service of one kind or another. He passed away at his home in West Brookfield in October, 1940.

was its regular motorman, and Walter Wheaton was the conductor during most of its quarter-century of active special service. Its most illustrious passenger was undoubtedly William McKinley, President of the United States, who rode the "Rockrimmon" in 1899.

In 1903 the Wason car works in Springfield built for the Berkshire Street Railway the palatial $20,000 "Berkshire Hills", and no car ever rode the trolley rails that could surpass it in elegance. Finished in San Domingo mahogany and other inlaid woods, the car was sumptuously furnished around its twenty-four tapestry-upholstered wicker chairs that served as seats. On a carved mahogany desk to the left, as one entered the "Berkshire Hills", was a register which each patron was expected to sign. Between the wide plate-glass windows with their red brocaded curtains, were mirrors with many-beveled edges. The aisle runner was a soft Wilton carpet, in harmonious colors.

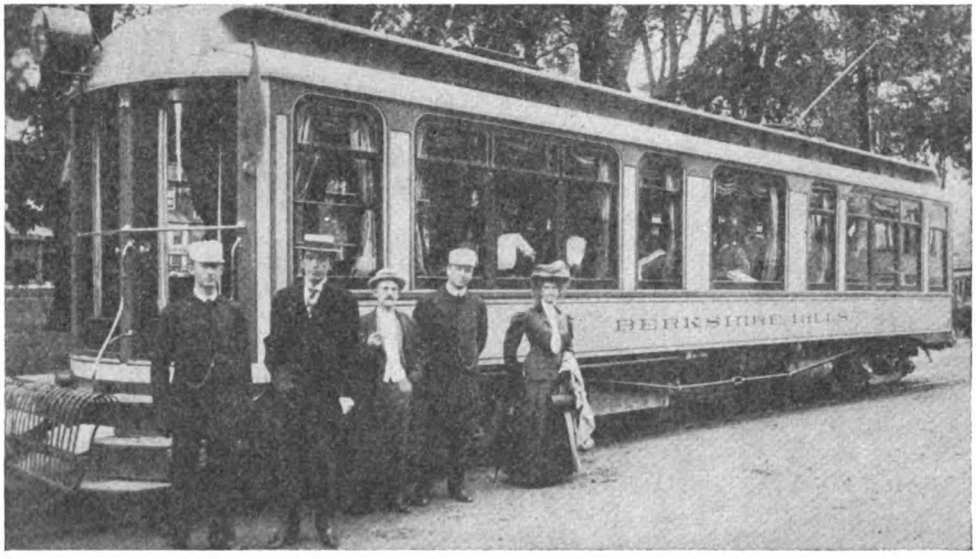
The car's exterior finish, of white enamel, with buff trim and gold-leaf lettering and striping, was equally elegant. Blasé indeed was the track-side farmer who wouldn't drop his plow each time the "Berkshire Hills" went by, and marvel at the luxury of deluxe trolley travel, without the annoyances of dust, cinders or smoke.

First used as a private business and parlor car,* it had early been put into extra-fare summer service and, starting in June, 1908, was operated daily between Great Barrington, Massachusetts, and Bennington, Vermont, by way of Pittsfield and North Adams, and taking in the most scenic parts of the Berkshire system. Its sixty-seven and one-quarter mile run, which took a little over four hours and a half, one way, was the longest regularly-scheduled passenger run for a trolley car in all New England. It broke no speed records, but why hurry such a trip as this?

The run of the "Berkshire Hills" was a shining example of effective merchandizing of deluxe trolley transportation. No pains were spared to make a trip aboard this car a memorable experience for the traveler. Among the innovations effected by C. Q. Richmond when he became manager of the Berkshire road in September, 1908, were sixty-two large signs which were placed along the right of way to mark the principal historic spots or other points of interest passed en route. Each sign bore a number, and illustrated folders with descriptive text that was keyed to the numbers displayed on these trackside signs, enabled the patrons of the "Berkshire Hills" to properly identify these locations as the car went by. It was well worth that fifty cents extra fare to be able to loll back in your comfortable wicker chair, bury your feet in the depths of that Wilton rug, and watch some of New England's choicest scenery drift past the wide windows; there were stop-overs at carefully chosen spots en route, and dinner at the Putnam House in Bennington to look forward to, as a fitting sequel to the trip.

* On its first charter trip in June, 1903, the "Berkshire Hills" took the Grand Officers of the Knights Templar on their field day outing to Abbey Lodge.

For a time, the route was extended on its southerly end to Canaan, Connecticut, adding another dozen miles to the run, which now traversed the width of Massachusetts and into two other states. Parlor car business got so heavy that an only slightly less ornate companion car, the "Bennington", was also put on the route to supplement the popular "Berkshire Hills", and ran for several summer seasons, beginning in 1909. But times were changing, and so were the public's tastes in travel, with the automobile coming into wider and wider use.



"Berkshire Hills" at Park Square, Pittsfield

In 1922 the famous "Berkshire Hills" was removed from service; but the familiar contour of its classic Wason lines can still be recognized today near West Pittsfield, where, passing its last days as a highway diner on the south side of the Pittsfield-Albany Post Road, stands the body of the car that was once the proud symbol of the best that the Trolley Age had to offer.

* * * * * * *

Perhaps no community in this area reflected a greater degree of dependence upon its street railway facilities than the little village of Conway, up in the Franklin County hills.

Attempts had been made to secure railroad facilities in 1849, 1866 through 1868, in 1889 and 1891, but largely due to the steep grades, the steam roads considered it impractical to build a line into Conway. In 1894 stock was subscribed for, in the amount of $20,000, for the construction of a trolley line to give Conway an outlet to the world. At first it was built only as far as Conway Depot on the New Haven's Shelburne Falls branch.

The road was opened for traffic in the spring of 1895. Two years later the line was extended across the Deerfield River. In 1899, a one hundred thirty-two foot dam across South River was built, and a lighting plant began operation in conjunction with the street railway to give Conway electric light service in 1900. It was Dr. J. B. Laidley, for twelve years manager of the Conway electric road, who was the leading spirit in continuously promoting the enterprise, to the joint benefit of the company and the community which it served. The initial cost of the road from its Burkeville terminus through Conway Village to South River Station on the Fitchburg Railroad, along with the power dam, buildings and all equipment, came to about $97,000, which was largely subscribed to by Conway residents.

In addition to its passenger service, the road provided the lifeline of freight transportation to the town's industries, including a tap and die shop, a shoe factory, and coal and grain dealers. Lumber was shipped out in considerable quantities, and at one time, eight hundred gallons of milk a day moved down to the railroad for transshipment.*

Early planning had envisioned extensions of the little Conway trolley road east to Greenfield and north to the New Hampshire state line; while the ambitiously-conceived-but-never-built Huntington & Westfield River Railway, in 1903 had projected its route from Huntington north through the hills to a connection with the Conway electric road at Burkeville. For these were the days of rosy visions for the Trolley Era, and even the map of Western Massachusetts was interwoven with the routes of projected street railways reaching to virtually every remote hill-town and hamlet.

In a few years' time the flurry was over,—and fortunately so, for few, if any of these proposed lines up into the hill towns would ever have earned a penny for their stockholders, had they been built. However the little Conway road, firmly entrenched within the existing periphery of its hill-industry area, found it could still carry on without going farther afield than its steam road connections at Conway Depot and at South River.

A resort known as Wildwood Park was acquired by the street railway and developed towards the fattening of its passenger revenues.

When the beautiful Field Memorial Library was built in Conway, temporary tracks were laid along the street from the trolley road, so that heavy materials for its construction could be brought to the site in carload lots.

By Act of the Massachusetts Legislature in 1907, the Boston & Maine Railroad secured control of the little Conway electric road which was effected early in the following year. In 1910 both the community and its electric line lost an indefatigable champion with the death of Dr. Laidley, who only the year before had interested the Boston & Maine in building a new $40,000 dam on South River,

* The Conway Electric Street Railway was the first trolley road in Massachusetts to have charter privileges for the transportation of freight.

and effecting many improvements in the street railway itself. It had also been through his efforts that Conant & Donalson's tap and die plant and DeWolfe & Hassell's shoe factory,—the town's biggest industry,—had been brought to Conway.

Sentimental attachment of the townsfolk for their street railway remained strong even after its management passed into outside hands. When the road had hard sledding in its later years, they were quick to respond with such aid as they could give; we read of one donation of fifty dollars, another of one hundred track ties,—to say nothing of many hours of cheerfully-given volunteer labor,—towards keeping the car wheels moving into Conway Village. Here was community spirit at its best.

The corporate alignment of the street railways of Western Massachusetts by 1913, was such that virtually all of them were controlled through three major groups. Over two-thirds of the trolley mileage here was under New Haven control, in one way or another, with nearly all the rest divided between the Holyoke-Northampton grouping, and that of the Massachusetts Consolidated system, which also had extensive holdings in Worcester and Middlesex counties.

The spread of New Haven control northward into the Connecticut Valley had been stopped with its Springfield acquisitions, the Holyoke Street Railway having resisted all overtures to sell out. The Holyoke and Northampton properties were administratively unified in 1912, and henceforth remained on the perimeter of New Haven influence in the street railway field.

Further north, the Connecticut Valley Street Railway and the once independent Athol & Orange were part of the Massachusetts Consolidated's holdings. The Conway Electric Street Railway was now controlled by the Boston & Maine. Among the ten separate companies doing business in the Western Massachusetts counties at this time, the Shelburne Falls & Colerain alone remained in what could be called a completely independent corporate position, by 1913.

This brings us to consideration of the matter of the New Haven's control of Massachusetts trolley lines, which was a major public issue at that time.

Coincidental with its expanding operations into various new fields, the New Haven Railroad had been the object of legislative scrutiny in Massachusetts for some years, coming to a head with the appearance of President Charles S. Mellen before an aroused legislative committee on June 11, 1907, to explain New Haven policy with regard to recent acquisitions of trolley lines in Massachusetts.

The matter of ownership of street railway properties within the Commonwealth by steam railroads actually dated back to the original codification of railway laws in 1874 and as re-enacted in 1906,—the general policy of the state being to oppose the ownership of other properties by steam railroads. Under the laws of the Commonwealth, such ownership of street railways had not been covered by any blanket rejection of their legality, but rather was it thought best to inquire into the individual justification for each acquisition,—in each

case the permission of the Massachusetts legislature being a requirement.

The Western Massachusetts trolley problem entered the legal field in 1906, when the Boston & Maine Railroad sought permission to purchase the Conway electric road, which was the means of focusing everyone's attention on the fact that the New Haven had been making such acquisitions in Massachusetts for several years without legislative authority. Attorney-General Malone now began an action in equity to show that the New Haven had acquired Massachusetts street railways in violation of the Act of 1906. The findings of the Special Master having supported this contention, it remained only for the Massachusetts Supreme Court to uphold the findings. This was done in 1908, and the New Haven ordered to dispose of its Massachusetts trolley lines by July 1, 1909.

Following the 1908 court order, the New Haven transferred the notes of the New England Investment & Security Company to another of its subsidiaries, the New England Navigation Company, in return for Rhode Island Company trolley stock and other securities. Later they turned up in the possession of the Billard Company, while the New England Investment & Security common stock was transferred to certain personal friends of Mr. Mellen.

Meanwhile the public's attitude toward the New Haven's alleged monopolistic tendencies was undergoing a change. Strong public pressure was being brought to bear in certain rural areas still without trolley service, yet it was now virtually impossible to interest fresh capital in a field already strewn with the corporate remains of numerous bankrupt predecessors. Only the New Haven Railroad was still in a position to build new trolley lines, and willing to do so, if permitted. In the western part of the state, in the area served by the Berkshire Street Railway, political pressure for new trolley line construction became so great that the legislature, by special act, now validated the New Haven's ownership in the Berkshire road, although running counter to the recommendations of the Railroad Commissioners in so doing.* However, when a bill came before the legislature to legalize the New Haven's direct control of other lines, upon the railroad's promise to spend $5,000,000 in rural extensions, the Commission had its way. This piece of legislation would have incorporated the Berkshire, Springfield and Worcester systems, along with certain other minor lines, into a single operating entity, empowered to acquire by eminent domain all private rights-of-way that might be approved by the Commonwealth. However, the Board of Railroad Commissioners reported unfavorably on the bill, stressing heavy increases in capitalization that would be involved, and it never became law.

The matter of New Haven policy towards Massachusetts trolley lines continued to be a *cause celebre*, with numerous commissions and committees deliberating, from time to time, upon the issues

* There was at least one precedent for this, for the Boston & Maine's ownership of the Conway line had been validated in 1906, for reasons of local exigency.

(Photo courtesy The Holyoke Public Library)

Holyoke — High and Maple Streets, South of Suffolk, Between 1885 and 1900

involved. Emphasis was being shifted more and more to the New Haven's financial responsibility; and in 1910 a special Validation Commission made up of the Massachusetts Railroad Commissioners, the Tax Commissioner and the Bank Commissioner, had set forth to ascertain "whether and to what extent the aggregate corporate assets (of the New Haven) were sufficient to secure its outstanding capital stock and indebtedness". The job of physically evaluating the New Haven's property was placed in the hands of Prof. George F. Swain, for many years consulting engineer for the Railroad Commission, and head of the Department of Civil Engineering at the Massachusetts Institute of Technology. The task of inventory and appraisal was entrusted to the firm of Stone and Webster, with instructions to report to Professor Swain. On the strength of their findings, the Railroad Commission certified to the General Court that, as of June 15, 1910, the New Haven's aggregate assets were sufficient to secure its outstanding indebtedness. According to Slason Thompson's *The Railway Library* (1911) "This investigation was peculiar in that, for the first time, it involved an examination of property and the ascertainment of the value of assets both within and without the jurisdiction of a single state".

As time went on, the New Haven had managed to materially soften public and legislative opposition to its policies only to find fresh attacks now coming from a new quarter,—this time the road's own stockholders, who had begun to view the heavy increases in fixed charges with considerable alarm. A series of serious train wrecks in 1912-13, and the passing of dividends, brought further resentment; and the road's alleged attempts to recoup losses incurred in trolley operation through introduction of stringent economies on the steam lines, added vociferous complaints from shippers and the public. In July, 1913, President Mellen resigned, asserting to the end that time would vindicate his policies. However, completely repudiated by his directors, he went into retirement from which he never emerged, leaving the New Haven with a legacy of burdening debt that even today has its puzzling aspects.

Following exhaustive investigation by the Interstate Commerce Commission, final decision as to disposition of the New Haven's trolley holdings was now to be made,—based on much broader issues than those which had been originally raised a decade earlier, and in Massachusetts alone. On October 17, 1914, the United States Court for the Southern District of New York administered the *coup de grace,* to end a decade of amazingly devious financial policy, when it handed down a final decision to the effect that the New Haven Railroad's various trolley and steamship holdings in four states constituted a violation of the Sherman Anti-Trust Act in restraint of trade; and gave the railroad until July 1, 1919, to finally dispose of them.

The New Haven's trolley securities were summarily seized in these proceedings and placed in the hands of trustees appointed by

the court, with the railroad being given certificates of beneficial interest equivalent to a receipt.

In connection with the dissolution of the New England Navigation Company, which was well under way in 1918, the notes of the New England Investment & Security Company were returned to the direct possession of the railroad. The common shares passed for a time into the hands of the New York engineering firm of Sanderson & Porter, but were later bought back, and by 1918 were held by a committee representing the New England Investment & Security preferred shareholders. It can thus be seen that technical control of the Springfield Street Railway and other companies which was represented by New England Investment & Security stocks and securities, passed through many hands in a remarkably short period of time, following the bizarre pattern of New Haven affairs.

It is not the writer's intent to go into the broader aspects of New Haven finance between 1905 and 1914. Although the first steps toward curbing its expansionist policies had been taken in Massachusetts, the most amazing developments in the tangled skein of New Haven affairs did not take place here. Suffice it to say that there were vast fortunes made and lost. However, regardless of what may have been the case elsewhere, the use of Western Massachusetts stockholders' money by the New Haven in its manifold trolley purchases, would appear to have involved gross administrative imprudence, at worst. The report of the Interstate Commerce Commission's 1914 investigation shows that only about $275,000 of the $65,000,000 estimated losses to New Haven stockholders during this period, had directly involved Western Massachusetts trolley properties. However, this did not take into consideration the further losses that were to result from still-continuing deficits after 1914.

That there was a definite direct relationship between the New Haven's wholesale trolley acquisitions and consolidations between 1900 and 1910, and the declining dividends of these once independent properties after their integration into the New Haven's financial structure, seems self-evident. Most of them followed much the same downward pattern. The Springfield Street Railway, for instance, which had, as an independent enterprise, paid eight per cent from 1878 to 1910 without a break, had to reduce its dividend to seven per cent in 1911, by which time its consolidations were finally effected; by 1917, the rate had been cut to one and one-half per cent, with no dividends at all on the stock in 1918 or 1919.

On the other hand, the company's *capitalization* had been nearly trebled since the advent of New Haven control, and had reached $4,654,700, its all-time peak, by 1917.

The Heyday of the Trolley

Street railway operations were steadily expanding, even if net revenues were not. With respect to traffic volume and the multiplicity of co-ordinated activities, the period between 1910 and 1923 was surely the Golden Era of streetcar travel.

In addition to passenger, freight, express and milk-transport service, the functional coverage of Western Massachusetts trolley roads for a time extended over a wide range of related services that included street sprinkling and flushing, handling of bulk mail between post offices, and (in the Connecticut Valley), even Railway Post Office service. For funerals, there were cars especially equipped to transport both casket and mourners to accessible points of interment with dignity and dispatch, and with a delegated trolley inspector in charge of the crew to supervise and expedite the trip. Springfield even had a trolley fire-engine-transport car which probably had no counterpart in this country.

Commonly known as the "transportation car" by those who worked with it, this odd vehicle was conceived in 1896 by Fire Commissioner Edw. P. Chapin and Chief Engineer W. J. Littlefield of the Springfield Fire Department. It was designed for the quick transport of horse-drawn steam fire engines to outlying points which could be readily reached over the street railway lines, then beginning to spread out from Springfield to the north, south and west. Built by the Wason Manufacturing Company the following year, the car was a little over thirty feet long and weighed seven tons. It consisted of two trucks, surmounted by railed-in platforms upon which men could ride, along with hose, tools and other equipment. To the rear truck was permanently attached the long low platform upon which a fire engine could be loaded. To put it aboard, the platform was lowered to the ground, and the front truck disconnected and run sufficiently far ahead so that the fire engine could be backed into position for loading. This was accomplished by means of a winch attached to the car's rear truck. The front truck was then brought back in place, and by means of chain hoists operated by right and left screws, the front end of the platform was raised and the side girders securely locked into place to make both trucks and platform intact as a unit. During its early tests by fire department officials, a steam fire engine was loaded in two and a one-quarter minutes from the time the car was run into position. In unloading, the front truck was detached in forty-five seconds, and horses hitched and ready to start off, in a minute and a quarter.

Although designed so that an electric traction motor could be attached to the axle of either truck, the car was never actually made self-propelling, and had to be towed to fires by the street railway's work cars or snow plows. Fire horses were not carried aboard the car, but were supposed to be waiting at the point of unloading,—unless the fire happened to be directly on the car line, in which case the fire engine was simply taken to the scene and unloaded.

Mr. J. J. Lyons, now deceased, but who was an employee of the Springfield Street Railway at the time, was given charge of the operation and maintenance of the transportation car, for which purpose he was made a qualified member of the Springfield Fire Department. Mr. Lyons was accepted into the department in December, 1897, becoming what was known as a "running member", working at

his regular job as a street railway motorman most of the time. He remained a member of the fire department until the employment of "call" firemen was discontinued here in 1908.

Although quite widely heralded at the time it was built, the transportation car never saw extensive use. However it is recalled that it once made a speedy run to Palmer, and carried Steamer No. 1 to the R. M. Bagg fire in Riverdale in time to help save the big creamery building from destruction. The car also went to Holyoke at the time of the McAuslan-Wakelin fire there in 1906.

Being the property of the Springfield Fire Department, it was not kept on the street railway's premises, but was housed in a small building in the rear of the Hooker Street Engine House, and adjoining the Springfield Street Railway carbarn property, from which a track led to it.*

About the time of the motorization of the fire department, which got well under way about thirty-five years ago, it was decided to sell the transportation car for what it might bring. According to the recollection of former Springfield Fire Chief Herbert C. Root, the department in 1914 was only able to raise the sum of twenty-five dollars in disposing of this vehicle of radical design which might once have set a new style in fire fighting methods if the automotive age had not been so close upon the heels of its development.

In Springfield and Holyoke, in accordance with contracts between the street railways and those respective municipalities, trolley sprinkler cars owned by the American Car Sprinkler Company of Worcester and leased to the street railways, began service in the late 1890s. The streets were wet down by means of a watering arm that swung out from the side of the car, which periodically filled up its tanks from street cisterns located at convenient points. These cars, with rated capacities of 2,500 to 3,000 gallons of water, were capable of sprinkling down seven to ten miles of streets, three times a day.

With the general adoption of hard-surfaced highway paving, street sprinkler cars were superseded about 1915 by trolley "flushers", somewhat similar in design, but which discharged water, accelerated by a pump, through a ten-inch nozzle with sufficient force to flush the street cleanly to the curb. These cars ran at night, and were in use from about April until November. They last saw service hereabouts in 1930, when the Springfield Street Railway discontinued their use, although one of the little open-platform flusher cars, in its general outline so remindful of the trolley car types of the 1890s, remained in storage at the Hooker Street yard until 1938, when it was broken up.

Probably the most colorful of these special functions was represented by the trolley mail service, an important feature of street railway operation in the Connecticut Valley for many years up until 1919.

* The shed that had housed the transportation car remained intact until early 1946, when it was badly damaged by fire, shortly after which it was dismantled.

Although a small car with full Railway Post Office facilities had been put in service between Northampton and Williamsburg in 1895, it was not until after the turn of the century, that trolley postal service in this area was extended south to Springfield, to become a major factor in mail distribution in the valley.

The inauguration of this new service was in response to growing needs for quicker dispatch of early morning mails from Springfield north, and the coincident desire of the Springfield newspapers to expedite the delivery of their morning editions up the valley. There were no early morning trains out of Springfield to the north, and the heavy Boston, New York and western mails reaching this city during the night, had to remain in the Springfield station for the first train north, which did not leave until about seven o'clock, bringing the mails into Holyoke, Northampton and Greenfield too late for early city delivery. As for the newspapers, they were delivered up the valley by horse-drawn teams, a system which was also far from satisfactory.

It was largely through the untiring efforts of Mr. L. L. Campbell, at that time postmaster at Northampton, that negotiations with the Post Office Department towards improving the service were successful. The Springfield newspapers participated in these negotiations, which resulted in the decision to inaugurate the first long-distance trolley mail service in western New England, and for which a new and specially-equipped car was built by the Wason works in 1901.

Put in operation between Northampton, Holyoke and Springfield, the new mail car was resplendently striking in its white enamel paint, richly embellished with gold-leaf striping and lettering. Inside, it was divided into separate compartments for mails and newspapers, with racks in the mail compartment for sorting letters. Two large sliding doors in each side of the car facilitated fast handling, while in accordance with standard postal regulations, there were slots on the side paneling so that letters could be mailed on the car.

The first run was made from Northampton to Springfield in the latter part of August, 1901. Postmaster Campbell rode on this inaugural trip, accompanying the car's first clerk, Robert T. Simison, in later years superintendent of mails at the Northampton Post Office.

For the first several years, in addition to the newspapers, the clerks handled mail for Holyoke and Northampton city delivery only, which was picked up in Springfield in the wee small hours of the morning, sorted aboard the car by carrier-routes and office lock-boxes. Two clerks were used on the car in these early days, one of whom got off at Holyoke with his mail. Under this arrangement, mail carriers in both Holyoke and Northampton were able to function more efficiently, while newsdealers received their Springfield papers fully two hours earlier than would otherwise have been possible. Connections were made at Northampton for the early morning Boston train over the Central Massachusetts Division of the Boston & Maine, so that early deliveries to Amherst, Belchertown, Ware and points east,

were also facilitated by the trolley mail, while the small, single-truck postal car, affectionately known locally as "The Burghy" operated a connecting service over the street railway line to Williamsburg.

Completion of the new electric road between Northampton and Greenfield in 1903 foreshadowed a further extension of the mail service northward, and beginning on April 3, 1905, a connecting car to Greenfield began carrying the mail out of Northampton. At that time, the Post Office Department saw fit to designate this joint facility as a railway post office route, officially known as the "Greenfield & Springfield R.P.O." The operation of the car was now in the hands of a clerk-in-charge of the Railway Mail Service, who worked the mails alone in covering the entire run from Springfield to Greenfield and back again, an eighty-six-mile round trip almost across the breadth of Massachusetts, daily except Sunday. Although the clerk made a car-to-car transfer of his mails at Northampton, the combined run was designated as "Train No. 1" southbound and "Train No. 2" northbound, in the postal records. The northbound trip was by far the busiest. It was customary for the Northampton car to wait on Lyman Street, Springfield, opposite the Union Station, during early morning hours while the mail was loaded aboard. After this, the car moved around onto Main Street to the Post Office (then located there) for newspapers and late city mails. Due to pull out at 3:40 A. M., the car was frequently delayed, at which times it had to do some fast stepping through the deserted streets and open countryside, to meet its scheduled connection at Northampton, an hour later. The schedule of the Northampton-to-Greenfield car was no less exacting, calling for arrival at Greenfield at 5:55 A. M., with but five minutes to spare for its connection with the six o'clock Troy-to-Boston mail train over the Fitchburg Division of the Boston & Maine, to which final transfer of mail was made.

Town Hall, Egremont

As a matter of fact, the fast time consistently made by the trolley mail has probably never been equalled over this particular forty-three miles of track, which was not built for high-speed operation, and a goodly portion of which was in city streets and settled suburban areas. It was the more remarkable because of the several stops en route, including the well-known Nickerson's and Fitzgerald's news rooms in Holyoke, and others in Northampton. Time was made up in the open stretches, with speeds of fifty miles an hour and upwards well within the reach of these cars. Every effort was made to keep to the schedule, due to the penalty clause in the postal contract.

Little time was lost in Northampton, where the clerk made a door-to-door transfer of his mail between cars on adjoining Main Street tracks, for the twenty-two-mile run on to Greenfield. The car used on this end of the route, over the Connecticut Valley Street Railway, was a combination type, with a small mail compartment at one end, and provisions in the other for the accommodation of such nocturnal passengers as might be abroad at that hour. This was a facility that was not provided on the Springfield-Northampton car, which carried no passengers.

Proceeding northward, the Greenfield-bound car put off mail at various points, including Hatfield and South Deerfield. It is recalled that the postoffice at Bradstreet (North Hatfield) was located in a house set well back from the street,—and that it required an accurate; as well as a hefty toss, to land the mail sack on the doorstep in this "shoo-fly" delivery as the car sped north. Later on the mail clerk was given a key to the farmhouse-post office here, and the car had to stop while he went inside to leave his pouch, pick up the outgoing one, and lock the door again, behind him. A former clerk on the run recently recalled the uneasy feeling he had as he unlocked this door in the dead of night, on his first trip,—wondering as he entered the dark hallway, if he had awakened the household . . . and if so, whether or not he would be mistaken for a night prowler, and perhaps become a target for a farmer's traditional shotgun. Fortunately for all concerned, no such incident was ever to mar the record of the trolley mail.

A number of well-known postal employees served their apprenticeship aboard the "Green and Spring", as the trolley Railway Post Office run was commonly called. It was a hard day's work at best. When railroad mail porters met the car at the depot underpass in Greenfield, to unload it as quickly as possible, it usually represented the first time that the weary clerk-in-charge had time to take a long breath since leaving Springfield over two hours before.

After the layover in Greenfield, the trip south was made somewhat more leisurely with respect to elapsed time en route, but with more work for the clerk in some ways. After leaving Greenfield at 10:15 P. M., the schedule called for arrival of the clerk and his mails at Springfield about one A. M., aboard the connecting car from Northampton. At one time, this return trip was made by way of

Willimansett and Chicopee Falls, and into Springfield via Brightwood, making collections from such street letter boxes as were accessible to the car en route—another unique function of the trolley mail.

Memories of the "Green and Spring" are many and varied. Newcomers to the run often fell victim to the landlubber's equivalent to seasickness on their first trips, because of the lurching of the car at high speeds, and they had to acquire an expert foreknowledge of the location of the curves ahead, in order to brace themselves at the proper time,—the alternative being to possibly go sailing out the side door or into a mail bag head first!

Blizzards and floods sometimes played havoc with the schedule. It is recalled that the usual forty-minute run from Springfield to Holyoke required four hours one blustery night in December, 1903, but the mail, as always, eventually got through. One time the car was involved in a collision with a meandering milk wagon, on North Main Street, Springfield. Milk was copiously spilled all over the street, but after quickly determining that nobody was more than shaken up, the crew immediately got the car under way again. They couldn't stop long for that,—there was a schedule to be met!

During the Northampton trolley strike in 1914, the mail cars, manned by street railway crews under orders of the Post Office Department that the mails must be moved, were the only cars to turn a wheel on the streets of that city for the duration of the strike.

Many other incidents could be cited in telling the story of the Connecticut Valley's trolley mail,—a service that was to symbolize punctual dependability through two decades,—although a blue-white headlight gleam, stabbing the darkness ahead along its lonely night run, and a mellow air whistle echoing through a sleeping countryside, was as much as many residents ever saw or heard of this colorful feature of Connecticut Valley life in a peaceful and well-remembered era.*

Patrons of independent resorts of all kinds were now funneling thousands of welcome nickels into the coffers of the trolley roads that managed to reach or pass virtually all the best ones.

Back in the days when a trip to the park was something for a small child to look forward to with bright-eyed anticipation for days ahead, not the least of the pleasures of the trip was the exhilaration experienced in riding on the front seat of the open trolley car, with the unfettered summer breezes full in your face, the treasured lunch basket by your side. From the vantage point of the cherished front seat, the trolley motorman's broad shoulders fully symbolized both Power and Authority, as with the turn of his controller handle, he

* The carriage of the United States Mails represented a doubtful profit at best for the trolley roads—as early as 1914, the Connecticut Company refused to handle it at existing rates.

The "Green and Spring," which quit finally in 1919, was succeeded by motor truck service. Operating as Star Route contract carriers, these trucks now handle mails up the valley out of Springfield in closed pouches only.

bent with calm assurance, the strength of a thousand Unseen Lightnings to his will; and the traffic in the street ahead melted as if by magic before the imperious clang of the floor-bell at his foot.

Riverside Park, on the Connecticut River just north of the Massachusetts-Connecticut state line, was the Mecca for thousands of these merry pilgrims; as, after a period of idleness, it again is today.

Known earlier as Riverside Grove, the place had been frequented by Springfield folk since the 1880s. However, its real beginning as a resort dates back to 1911, when Henry J. Perkins, well-known Springfield provision dealer, purchased the park, and a year later enlarged it from sixty to one hundred acres.

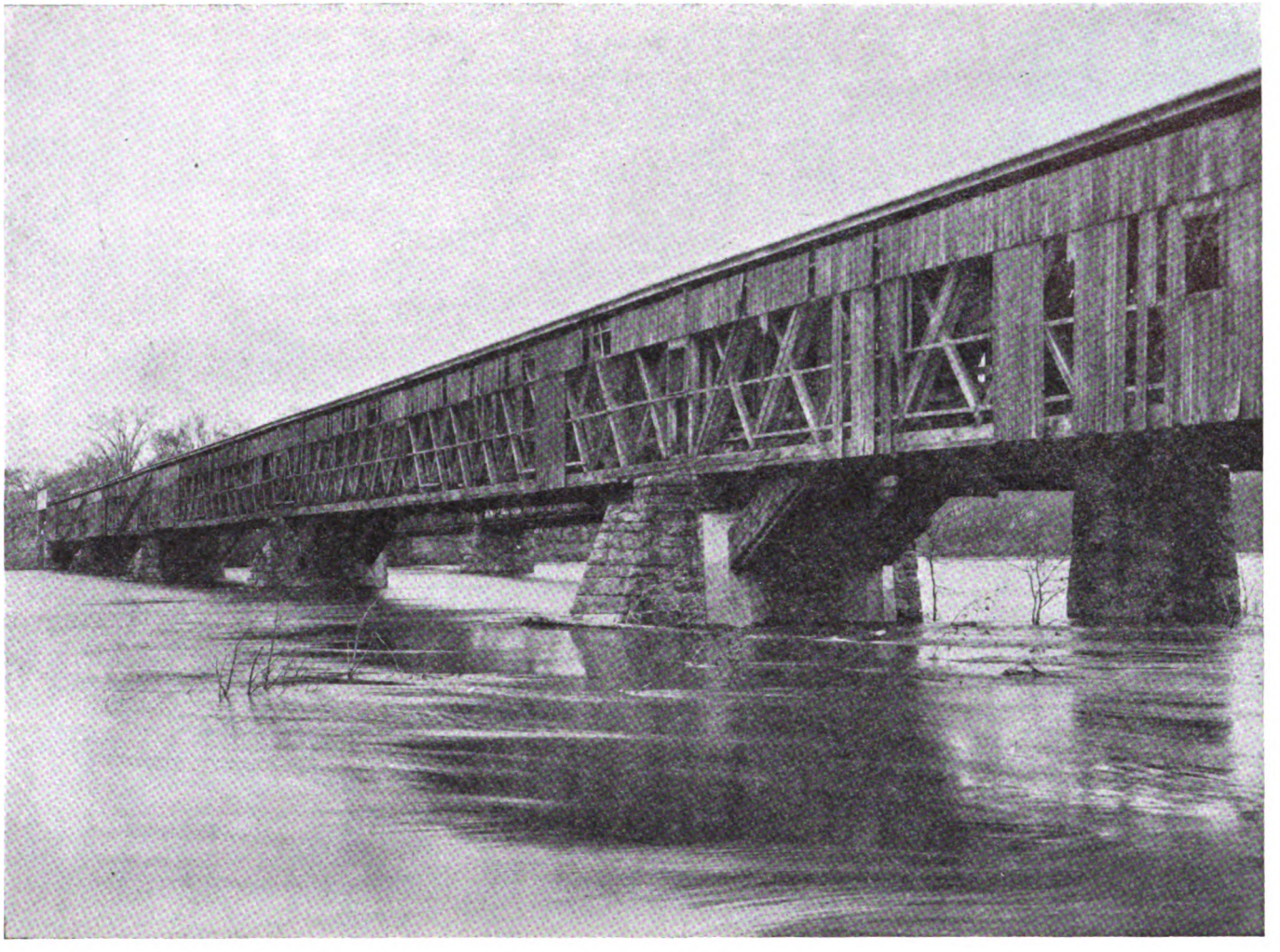
In its fifteen weeks' season in 1912, the Park's attendance went well over the million mark, and its success was assured.

Clambakes were featured here, with as many as 3,000 sometimes served at a sitting. You can go to a clambake at Riverside Park today, as a matter of fact, and ride the roller coaster, and dance to name bands and do a hundred-and-one other things within the scope of its varied attractions,—but no longer can you walk down to the Elm Street landing on Springfield's riverfront, board the steamer *Sylvia* or the *Zita Mae,** have an evening's fun at Riverside and come home through Agawam on the breeze-swept seat of an open trolley. Or vice versa, if you wished. It was one of the compensations of living in the days before radio, and television, and home washing machines. And atomic bombs.

As Riverside once owed much of its popularity to its accessibility by trolley, so did Lake Pleasant, the well-known spiritualist resort in Franklin County; to say nothing of Laurel Park, the popular Methodist camp-meeting ground in Hatfield, and other resorts that were difficult of access otherwise. Memorial Day usually meant special trips to the cemeteries; and in the crisp autumn days, many a fairground owed a major share of its patronage to the ease with which the trolley could bring visitors en masse to its gate. Of these, the Eastern States Exposition undoubtedly provided the heaviest concentrated traffic volume. The Springfield Street Railway had a trolley loop and loading station inside the grounds, equipped for fast handling of large crowds. During the 1920 Exposition Week alone, the cars carried 130,906 revenue and 43,990 transfer passengers, to and from this point.

From the 1890s until the first World War, street railway-owned parks and resorts also were reaping a golden harvest. The Holyoke Street Railway had beautiful Mountain Park on the east slope of Mt. Tom, and there was Orient Springs at West Pelham, a short ride out of Amherst; the Berkshire Street Railway had an extensive resort at Berkshire Park, near Pittsfield. It also had Fountain Park, four miles north of Great Barrington. In early days the Pittsfield Elec-

* Another steamer, the *Mascot,* ran on the river in still earlier days. It was the *Mascot* that carried President McKinley and his party to Riverside Park at the time of his visit to the Springfield area in 1899.



Covered Bridge, Montague

tric Street Railway had a popular resort on the south shore of Pontoosuc Lake, and the Hoosac Valley Street Railway's Valley Park between Adams and North Adams, developed from farm land purchased in 1891, was profitably operated for some years. The latter was one of the first street railway parks to be established in New England, or in America, for that matter. Forest Lake Park in Palmer and Pequot Park (Hampton Ponds) in Westfield were operated under Springfield Street Railway management for some years, having been taken over from the Palmer & Monson and the Woronoco Street Railway respectively, which had developed them earlier. Many will recall "King and Queen, the diving horses", which were major attractions at Hampton Ponds in 1904-05, while under the Woronoco's management. The Springfield Street Railway also operated River Bend Park at Russell, where it kept a herd of mountain burros for the youthful patrons to ride. Other one-time trolley-owned parks that will still arouse pleasurable memories among old timers hereabouts, were the Northampton Street Railway's Marshall's Grove on the Easthampton line, and Hosford's Grove near Williamsburg; the Massachusetts Northern's popular Brookside Park in Orange; the Shelburne Falls & Colvain Street Railway's Hillside Park in Shattuckville, and the Conway Electric Street Railway's Wildwood Park in that town.

Among the first, if not the very first airplane flights in this area were made by Charles F. Willard on August 27-29, 1910, in what was at that time the largest biplane in the country, under the sponsorship of the Connecticut Valley Street Railway at Rock Dam Park in Montague, the flights being witnessed by large crowds.

In pre-automobile days these parks furnished substantial revenues to the trolley roads, which both controlled and provided transportation to them. With the advent of the automobile as a major competitor of the trolley car, park revenues fell off appreciably. Basic changes in public amusement habits found the street railway companies generally either unwilling or unable to keep abreast of the times with respect to park management, the unprofitable operation of which resulted in the abandonment or sale of most of these subsidiary enterprises by the late '20s.

A notable exception to this, however, is Mountain Park, which has been owned and operated by the Holyoke Street Railway for half a century, and is still in that company's hands today. This beautiful four-hundred-acre resort, the only street railway-owned park remaining hereabouts, has entertained 10,000 visitors of a summer evening. Of considerable natural beauty, this park had been developed through many carefully planned improvements to the point where it became one of the most scenic, as well as one of the largest street railway-controlled resorts in the world. Once the "jumping-off place" for the unforgettable cable-car ride up Mt. Tom, there is still something here to suit every taste, including variegated but closely regulated amusement concessions. You can come here for an all-day picnic, and dance to "name bands" at the Pavilion in the

evening. One of the first summer theaters, if not the first, was established here, with leading stock companies playing to capacity audiences at the forty-eight-year-old casino, where Mountain Park's Valley Players hold forth today.

Mountain Park gives ample proof that, with the advantages of scenic location, foresighted and intelligent management can still make an amusement park a profitable investment for a company whose primary function is providing public transportation.

One misses the trip up Mt. Tom, however, which was for years a "must" for all New England sight-seers. The cable-car road up the east slope of the 1214-foot mountain was a project of the late Dr. Henry O. Hastings, who had been the prime mover in the purchase of the four-hundred-acre tract of the Whiting Street estate which later became Mountain Park.

Dr. Hastings did not want to stop there. He succeeded in getting the interest and support of Frederick Harris, president of the Third National Bank in Springfield; John Olmsted, president of the Springfield Street Railway, and Mr. Graves of the Springfield *Homestead* in planning a means of public access to the summit of Mt. Tom. Construction of the cable railway up Mt. Prospect (Lake George, New York) and of the Catskill Mountain Railway gave incentive and practical ideas for a similar line up Mt. Tom.

Eventually, the Mt. Tom Railroad was organized, being capitalized at $100,000. Each holder of four shares of Holyoke Street Railway stock was given the opportunity of purchasing one share of Mt. Tom stock at one hundred dollars par.

The success of the Catskill operation had offered a seeming solution to the Mt. Tom problem, employing a single track with a switch midway up the incline, with cars so constructed that the wheels safely crossed the running cable.

It had been the original plan, following early surveys at Mt. Tom, to build the line straight up the mountainside, requiring a trestle six hundred feet long, and at most points, thirty feet high. This trestlework would have been expensive, requiring replacement every eight or ten years. However, an engineer named Parker, who had made the survey and who had later severed his connection with the Otis Elevator Company, which was making the plans for the road, came up with an idea. He was convinced that, if given the job, he could build the road better and cheaper, and all on the ground, rather than on expensive trestlework. The line would have a curve in it, and an improved device for getting the cars over the running cable.

Having convinced the Mt. Tom management of the feasibility of his plan, Parker's men set to work early in the winter of 1896. Rocks were drilled and blasted, ties and other materials hauled in by horsepower, and the roadbed finally completed. The chassis of each of the two cable cars having been assembled, they were put to work hauling construction materials to the summit house, after which their superstructures were added. These cars were named *Rowland Thomas* and *Elizur Holyoke*, and had wide front platforms so that

supplies could be carried to the Summit House,—for there was no other way to get them there.

Having been immediately leased to the Holyoke Street Railway for operation,* the administration of the Mt. Tom Railroad was integrated with that of the Holyoke company throughout its corporate existence. Business was good from the start, and the road paid six per cent dividends for twenty-five years, and two per cent for ten years longer. The first Summit House proved to be wholly inadequate, but an overheated furnace wiped out the mistakes, about four years after the building was opened. A new and much larger structure was then built, containing an excellent restaurant, refreshment counters, a dance floor, wide verandas, and eighteen powerful telescopes from which, without charge, visitors could view the breathtaking panoramas spread out below. On clear days, the mountains of southern Vermont and New Hampshire were clearly visible, and you could catch the glint of the sun on the dome of the state capitol at Hartford, Connecticut.

Seventy-five thousand people rode the cable cars to Mt. Tom during the 1920 season alone, 3,300 of them on a single summer Sunday of that peak traffic year.

During its long active service, the road had only one accident of any consequence—and that had a humorous angle. One time a couple spooned too long and with too much preoccupation at the summit. They missed the "last call" and consequently the last car down. The watchman was notified of their predicament and an operator was sent to run the car up from the lower station, to counter balance the car coming down from the summit carrying the abashed couple. The employee operating the car starting up from below was a bit inexpert with the signals, and started up too soon. Without the counterbalancing effect of the upper car, at the other end of the cable, the lower car blew a fuse, and the car rolled backwards and through the rear wall of the lower station building. Fortunately no one was injured.

The burning of the beautiful Summit House, at sunset of a warm May evening in 1929, virtually spelled the end of the popularity of the Mt. Tom road and the recreation center at its peak. Thousands of people for miles around were afforded the spectacle of the big structure blazing forth like an immense jewelled crown in challenge to the setting sun. The stiff breeze quickly brought the building down to a heap of glowing embers.

Another, and smaller Summit House was built farther to the west and north of the burned structure, but something had definitely gone out of the place. It was never the same after that.

Abandoned in 1936, the Mt. Tom cable roadway was to be the scene of its first tragedy some ten years afterwards, when a United

* The first trips operated on the incline August 5, 1897, with the cars in charge of Ephraim Richey and Asa Holmes, motormen, and William Doucette and Edward Smith, conductors.

States transport plane en route from Iceland to Westover Field crashed into the mountainside at the old railroad cut near the summit, killing all twenty-six of its occupants. It was only because the cable roadbed was still intact that relief parties were able to reach the scene of New England's worst plane disaster without undue delay,—and even then, only the Army's rugged four-wheel-drive vehicles were able to climb the steep slope, with its twenty-one per cent maximum grade.

However, there are many who still turn longing eyes toward the Mt. Tom summit during the hot summer days, and recall those refreshing trips on the open cars out of the heat-ridden city and up to Mountain Park and thence to Mt. Tom, there to loll in the ever-present breezes with a picnic lunch or a good restaurant meal to top off the trip. If you used the glasses on the telescope deck, it was a never-ending thrill to be able to read the time from clock-towers in towns in the next county, but which through the glasses looked almost close enough to reach out and touch. Even without the glasses, you could see as far as Mt. Ascutney, near Windsor, Vermont, eighty-five miles to the north, and the distant backdrop to a magnificent far-flung scenic panorama. These and other treats once shared by thousands are reserved for the technicians of the radio transmitting station which now graces Mt. Tom's summit, and which in its own modern way, also serves the needs and pleasures of mankind from this memory-treasured spot.

At their peak, the Western Massachusetts trolley roads were running their eight-hundred-odd cars over five hundred sixteen miles of track within these four counties, with forty-seven additional miles in Worcester County, Massachusetts, in Hartford County, Connecticut, Bennington County, Vermont, and Rensselaer County, New York, also under their management,—five hundred sixty-three miles of track in all.

By 1915 the dozen active Western Massachusetts street railway enterprises represented a total investment in plant, road and equipment, of nearly $24,000,000. It had become Big Business, with a capital "B".

Major plant additions were now underway on the larger properties. In 1914 the Holyoke Street Railway had opened its new $260,000 car house at Canal and Bridge Streets in that city. Covering over two acres of ground, it was one of the best-laid-out structures of its kind in the country. In it could be accomplished almost anything, up to building a new car. It is still in service as the company's bus garage.

Shortly following the above, a new one-hundred-forty-car-capacity car house plant was opened by the Springfield Street Railway in 1916, at the old Hooker Street location,—site of the company's first horsecar stables, and various subsequent structures. This latter plant included facilities for open-air storage of cars, which was only then becoming accepted practice in the traction industry. Thus,

in addition to its enclosed car house, the new Hooker Street plant included some three miles of open storage tracks.

As bright as the immediate picture appeared, however, there were storm clouds looming on the far horizon. Competition, in the form of the "jitney bus" was just becoming apparent—although it is doubtful if even the most discerning street railway management could have envisioned as far back as 1915 or '16, the magnitude of the competitive struggle in which they were about to be engaged.

Among other things, the jitneys were to become involved in what was, in effect, the first major traffic problem of the budding automobile era in our cities.

When Prof. Albert F. Richey, the well-known Worcester street railway engineer, conducted his exhaustive survey of Springfield Street Railway traffic and operations early in 1917, he called attention to many things beside the fact that the Springfield Street Railway offered one of the longest possible average-maximum-ride trolley services in the country,—4.6 miles, as against 3.9 for the closest New England city in this respect. He urged the introduction of zone fares toward the equalization of this situation, and various new loops and extensions of the car lines, particularly to East Springfield, which was growing fast under the stimulus of its new Westinghouse plant, but was now inadequately served by public transportation.

With respect to the jitneys, Prof. Richey's survey was enlightening, in that his street count of Main Street traffic, between Bridge and Worthington streets showed the following breakdown of passing vehicles during a nine-hour period between eleven A. M. and seven P. M.:

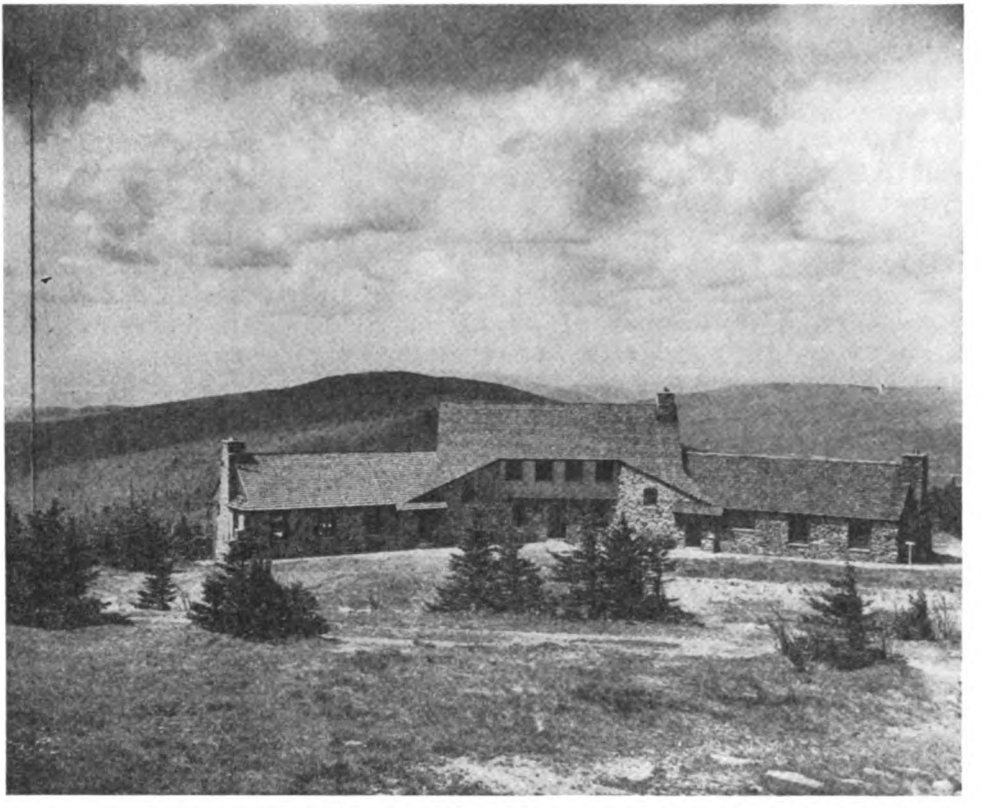
	Street Cars	Jitneys	Other Autos	Teams
Northbound	686	2,013	1,398	254
Southbound	746	1,919	1,371	180

The survey added graphic evidence that the automobile, so recently the expensive plaything of the rich, was now coming into its own as a convenience within the reach of the common man.

Professor Richey, noting the extent of jitney traffic, quite understandably recommended their regulation by municipal authorities, in his report. He was doubtless thinking principally of their competitive inroads upon trolley revenues, but their contribution to Main Street congestion was also considerable. Previously, the accumulation of trolley cars on Main Street, where virtually all of the twenty-five-odd trolley routes converged, had been largely blamed for this. Otherwise, these were the days that would have gladdened the heart of the harassed 1949 motorist,—for in 1917 one could always readily find a place to park one's automobile on any downtown street.

Let us stop and study the jitney situation for a moment, and speculate upon the ubiquitous vehicle which had become both a boon and a plague within a few short months.

Jitneys,—so-called because of the fact that they charged a "jitney", or five-cent fare,—got their start on the West Coast in 1914, and by the following year had invaded New England in large numbers. It would appear that any enterprising individual who owned a Model "T" Ford touring car was eligible to join the rather elastic fraternity of the early jitney drivers. With their owners often repre-



Bascom Lodge, Mt. Greylock, Berkshire County

senting doubtful responsibility, their capacity limited only by the number of passengers who could crowd inside or cling precariously to the running boards, the jitneys were a troublesome thorn in the side of the street railway companies from the start. Their rise in popularity had been phenomenal. By the fall of 1915, a bare few months after their first appearance hereabouts, there were four hundred three of them operating on the streets of Springfield, one hundred thirteen in Holyoke, others in Greenfield and Pittsfield. They ran over the choicest routes, but only at such hours as they chose. Eventually, after several bad accidents had focused attention upon the need for regulatory action, municipal controls were placed upon jitney operation, which restricted them to stated routes and schedules. Buses (the first to be seen hereabouts) replaced the open touring cars

on the Springfield jitney routes, which the traveling public could now ride in comparative comfort and safety; and that's what many, many people did. As late as 1923, the jitney drivers in Springfield, who had by that time organized themselves into a protective association, through their attorney confidently expressed the opinion that, given half a chance, they could put the trolleys out of business,—and but for further sharply restrictive measures by municipal authorities, they might well have done so.

Moves to combat the jitney menace were varied in nature. The Massachusetts legislature had opened the door for retaliatory measures by the embattled trolley roads, when it passed an act in 1918 which would permit street railway companies to operate buses of their own. First to take advantage of this legislation in Western Massachusetts was the Connecticut Valley Street Railway, which on September 21, 1918, was specifically authorized to put on a bus line between the end of its trolley route in the village of Millers Falls and the carbarn of the affiliated Northern Massachusetts Street Railway in Orange. It shortly was to make a similar move in another area, in an effort to protect its position in what had become, since the introduction of the jitneys, a sharply competitive territory.

The first jitneys in the Greenfield area had put in an appearance in 1915. Local travel between the communities of Greenfield and Turners Falls was particularly heavy. The distance by Connecticut Valley trolley was 4.8 miles; by highway only 3.14 miles. The jitneys had been quick to take advantage of this and, until the passage of enabling legislation in 1918, there was very little that the street railway could do about it. However, following the inauguration of their pioneer Millers Falls-Orange bus service, the Connecticut Valley road took the initiative from the jitneys on the Turners Falls line. Starting in November, 1919, its trolley service between Greenfield and Turners Falls was supplemented by buses operating over High Street and Route 2A, an integrated operation which was to continue until 1924. The Connecticut Valley Street Railway was thus the first trolley road in Western Massachusetts to use buses under legislative authority, as well as one of the very first in New England to do so at all.

In its own area, the Holyoke Street Railway was resorting to drastic measures, as the jitneys continued to eat deeper and deeper into its trolley revenues. Upon the failure of the Holyoke city government to take action satisfactory to the street railway in dealing with the jitney problem, the company on March 27, 1921, pulled the cars off its Holyoke-Chicopee Falls line in protest, and not a wheel turned on this route for over a month. The cars finally resumed operation again on May fourth.

It was in Springfield that the jitneys made their last stand. However, upon the promise of the Springfield Street Railway that it would improve its service if freed from jitney competition, municipal authorities moved towards taking the latter off the streets. In the spring of 1923 Mayor Edwin F. Leonard declined to sign any more jitney licenses, although permitting the renewal of those previously granted.

At that time the thirty-three jitney buses still in service in Springfield were operating on half a dozen profitable routes, practically all of which paralleled existing trolley lines: State to Benton Street; Walnut Street (Allen Street and Summer Avenue); Dickinson Street; Liberty Street; Belmont Avenue and Brightwood; and the buses were carrying an estimated 7,500 passengers a day, which represented a heavy potential loss to the trolley company.

The street railway had already shown its good faith towards the fulfillment of its promises by purchasing new cars and establishing several feeder bus lines of its own, to serve areas not reached by its trolleys. Time was running out for the jitney operators. The Springfield City Council, following a stormy session in May, 1924, refused to renew the twenty-nine outstanding jitney licenses,—following which the independent bus operators attempted to continue running, for the time being, on a pay-if-you-want-to basis, since they could no longer charge a stipulated fare. After a short time, however, seeing the futility of further unlicensed operation, they took their buses off the streets. Thus, the passing of the jitney buses from the Springfield transportation picture in 1924, marked the end of nearly a decade of the toughest competition that the Western Massachusetts trolley roads had ever had to face up to this time.

The street railways had perhaps been slow to learn that the most effective way to meet jitney competition was to operate buses themselves. They now had the legal power to do so, and after a belated start, were making the most of it; for it was by now quite apparent that there was going to be a definite place for the motor bus as well as the streetcar, in the field of local transportation. If this fact needed further proof, the now-outlawed jitneys had provided it, by consistently making better time than the trolleys over the same routes.

But we are getting ahead of our story. Let us go back to 1917, when a rather significant event was taking place. It was August sixteenth of that wartime year that saw the opening to public travel of the last long-distance trolley line to be built in Western Massachusetts, and which was to connect the extensive Berkshire Street Railway system with the rest of the 5,000-mile New England trolley network for the first time. Significant with respect to a changing trend, was not only the fact that this twenty-four-mile line which traversed some of the most sparsely-settled territory in the state in its course through Becket and Otis and Blandford townships, had cost the New Haven Railroad a cool $3,000,000 to build,—but also that it had taken over six long years of controversial, stop-and-go construction to get it finished. Considering everything, the wonder is that it was ever completed at all; for times had changed, and a new trolley line through the woods that would have looked like a good investment in 1911, was equally likely to be viewed as a gold brick by 1917.

When the village of Huntington turned out en masse that August day to welcome the first Berkshire Street Railway car that had come over the mountain from Lee, there must have been a few reflective

folks on hand whose pleasure was tempered by a deep foreboding. Here was the Berkshire trolley at last. But how long could it keep going?

The history of the Huntington-Lee trolley line was either long, or very short, according to how you want to look at it. Anyway, it was interesting. Much of its route had been in the minds of ambitious promoters, in the field notes of surveyors, or on the blueprints of engineers, for perhaps a decade before the first sod was to be turned in its actual construction,—which, in turn, took six years in its fulfillment,—and actual operation over the finally-determined and completed route lasted for so short a time that few people outside of the immediate area, ever knew of its existence. Its quick demise was unfortunate, although economically justified. With much of its line undoubtedly representing the finest trolley construction in Western Massachusetts, it deserved a better fate.

Originally part of a projected steam railroad route, later proposed for through electric freight operation by the New Haven in competition with the Boston & Albany, what later was to become the Huntington-Lee trolley line was successively modified in plan from time to time, in the interests of economy or political expedience. Thus, what had once been planned as a through rail route from the Connecticut River to the Hudson, was to finally wind up as a relatively short connecting link between the existing lines of the Berkshire and Springfield trolley systems.

Nevertheless, between East Lee and Tiffany Place, Blandford, on its westerly end, the line had been well and solidly built, in accordance with the best steam-road practice. Deep cuts and high fills reduced gradients to a minimum, and five massive offset concrete arches either bridged the principal highway crossings, or else went under them, according to the terrain. At one point in Otis the road climbed to its highest point, 1,742 feet above sea-level, one of the highest elevations to be reached by any trolley line in New England. However, from North Street, Blandford, down into Huntington, its hastily completed easterly portion was, in contrast, a succession of short tangents and sharper curves, with a stiff seven per cent ruling grade that required four specially-constructed "catch tracks" or safety sidings, to prevent possible runaway cars from tearing down the slope of Cook Mountain into Huntington Village.

Although its policies in regard to trolley line ownership were under sharp legislative scrutiny in Massachusetts, the New Haven Railroad had been specifically authorized to build the Lee road in response to strong political pressure for new trolley line construction in this region. When the first sod was turned in April, 1911, it found at least one ardent zealot in a position to realize a long-nurtured ambition. This was James Clark, aged seventy, and postmaster at Otis, who hadn't been outside of that Berkshire township for thirty years. Some fifteen years earlier he had sworn that he never would leave its confines, until the trolley came to Otis. It looked as though he could do so now, as a force of fifty men began first work on the

construction of the long-awaited Lee line, near the William Griffin house, right there in Otis; and the new era appeared to be dawning for the Berkshire Hill Towns.

However, before the line was to be completed, construction work came to a standstill several times. Defeat of the Merger Bill of 1913 virtually killed whatever chances there might have been to induce the now-reluctant New Haven to voluntarily proceed with new trolley construction in this sparsely-settled territory, unless forced to do so. This force the Commonwealth was now prepared to apply, at least toward the completion of the project already begun.

A most singular situation existed, however. The New Haven, which had been divested of direct control of most of its trolley holdings by Federal court order in 1914, under the provisions of the Sherman Anti-Trust Act, was now being sternly reminded by the Commonwealth that it still had certain obligations to fulfill, with respect to the Berkshire system, which it had been allowed to retain. Completion of the new line out of East Lee was considered to be one of these obligations. Not only that, but the New Haven had been further directed* to substitute Huntington for Westfield, as the easterly terminus of the line. The New Haven, which could no longer envision any kind of profitable operation under these altered plans, proceeded to complete the road as ordered,—working through the most difficult of mountain terrain, and under the impetus of a $2,000,000 penalty bond, doing the remainder of the work as cheaply and as quickly as possible. Western Massachusetts now witnessed the rare phenomenon of a major steam railroad, forced by the Federal courts to relinquish jurisdiction over valuable trolley holdings that it would have liked to keep, and at the same time being required by state statute to complete the construction of a costly new trolley road that promised little in return, and that the New Haven by this late date would have gladly washed its hands of.

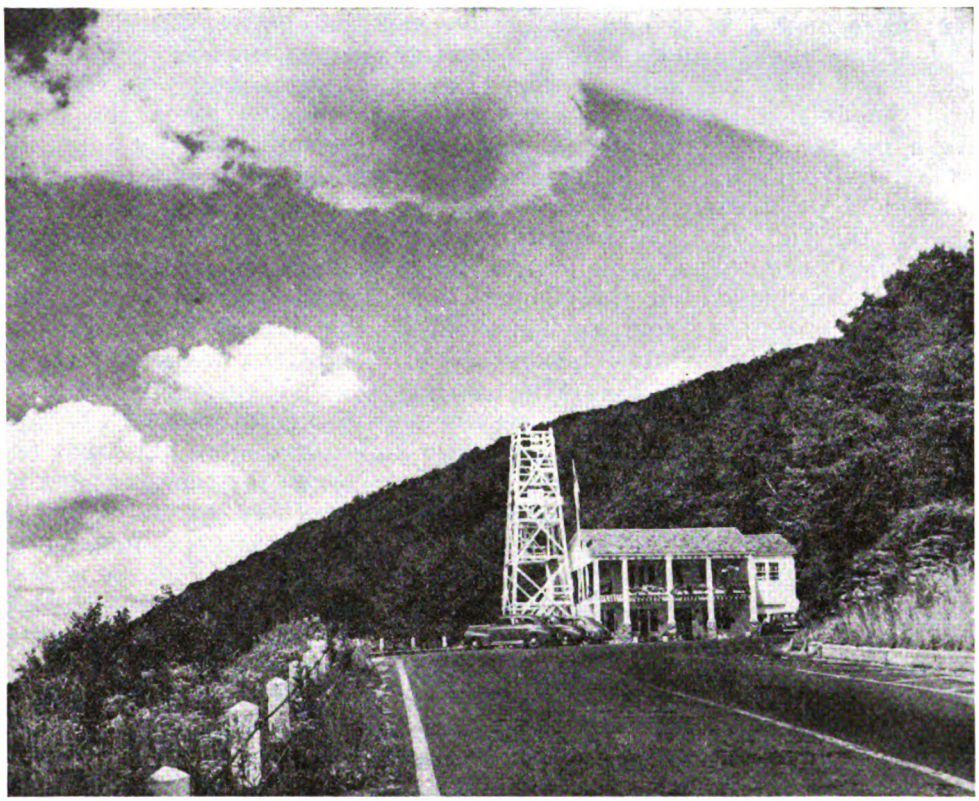
With such a background of legal and political entanglement, was the road finally completed; cars had been operating on infrequent schedules on its westerly end since 1915, but the first through car into Huntington from Pittsfield and Lee was greeted with all the acclaim that could be accorded an epoch-making triumph.

And it *was* a triumph of a sort. For the first time in history, one could now travel from Hoosick Falls, New York, through Bennington, Vermont, and via Pittsfield, Springfield and a variety of routes through eastern Massachusetts and as far as Portsmouth, New Hampshire, over a continuously connected network of street railway trackage. For the first time, some 5,000 miles of trolley lines in all the New England states except Maine, as well as in eastern New York state, was accessible to the movements of a single trolley car, if you wanted to charter one,—and this was often done in those days. If your W.C.T.U. chapter wished to charter the Springfield Street Railway's *Rockrimmon* for an outing to Hampton Beach, it was right

* As a result of local political pressure.

there for you, with courteous well trained crew in charge of a company inspector, to see that you had a good time, and to guide your car over the maze of interconnecting tracks of other companies, between Springfield and the Beach.

But to return to the Huntington-Lee line, its functional value as a link between the previously isolated Berkshire system and the



Hairpin Turn, Mohawk Trail, Berkshire County

eastern lines, proved to be negligible. An early incident proved prophetic. When Berkshire's General Manager Richmond and his party of officials, newspapermen and other invited guests rode down into Huntington Village on that first special car, they overtook three children, returning home from a berrying trip up on the mountain. They were invited to get aboard the car; and thus three pails of huckleberries became the first commodity to be handled over the newly completed line. People promptly dubbed it "The Huckleberry Line". As time went on the appropriateness of this jokingly-applied cognomen became more and more apparent.

With no high-speed through operation now possible, because of the grades and difficult terrain of the Huntington end of the road, it was forced to depend on local sources for its entire revenue. After

the novelty of a first ride wore off, passenger business remained pitifully small, and mainly consisted of resort travel between Pittsfield, Lee and Greenwater Pond on the western end. Railroad freight cars, hauled by the Berkshire's small electric locomotive, could be operated only over the line's well-built western end, between Otis and Becket and the New Haven Railroad's freight connection at Kennedy's Siding at South Lee. Some grain, produce, fertilizer and coal were moved in to local industries and the sparse upland farms, and stone, lumber and cordwood were taken out, in some quantity. But aside from the mills at East Lee, a granite quarry in Becket was the only important revenue-producing industry along the line. As a matter of fact, it would have been difficult indeed to find a twenty-four-mile stretch of territory anywhere in Massachusetts with a resident population that was spread out so thin.

In the fall of 1917 a bare few weeks after the "Huckleberry Line" had been opened from end to end, it was announced that service would be suspended for the season,—and it was done without much articulate objection from anybody. With the World War now involving the United States, transportation conditions were extremely unsettled everywhere. Following conferences held in the spring of 1918, however, it was agreed to resume service again, and cars began running over the "Huckleberry's" idle rails once more in April of that year. They continued until October, when service was again suspended. This time the influenza epedemic (then at its height), and generally disturbed labor conditions, were given as the immediate reasons for abandonment.

In the spring of 1919 further attempts were made to induce the Berkshire to re-open the Huntington-Lee line. However, that company, calling attention to the sizeable operating losses of previous seasons, declined to do so unless the towns along the line would agree to assume the burden of the anticipated deficits. With about $8,000 involved, the towns could ill afford to do this, as much as they wanted the line kept running. The New Haven was appealed to, and attention was called to that railroad's statutory obligations set up under the Acts of 1910. However, the New Haven was having troubles of its own elsewhere, and affirmed that its obligations toward the Huntington-Lee line had been nullified by the court decree of October 17, 1914, which had stripped the New Haven of control of many of its erstwhile properties.

The New Haven still owned the Berkshire Street Railway, however, and the Hill Towns waged a losing fight to try to save the Huntington-Lee, into the early summer of 1919. There still might have been some faint hope of eventual resumption of service, had not a strike been called on August ninth, which was to tie up the entire Berkshire system for nearly two months of that first post-war year. The strike dealt a hard economic blow to all Berkshire county,—but for the "Huckleberry Line" it meant the end.

By the time the strike was settled, on October first, the Berkshire could give little time or thought to the fate of the already rusting

Huntington-Lee line, and the Commonwealth, recognizing that times had greatly changed since the Acts of 1910 had been promulgated, was now inclined to be most lenient with the New Haven's recognized statutory obligations. Labor and material costs were soaring; and the impact of competition from the private automobile was now being noticeably felt, even by the more profitably operated street railways.

Led by the owners of the Becket quarries, who had been most seriously affected by the loss of service, the embattled Hill Towners fought hard for the restoration of their vital trolley line, right up to the bitter end. However, on October 31, 1919, when the Massachusetts Public Service Commission denied their final petition to force by statute a resumption of service, that august body was to soften the blow but little by suggesting that further direct negotiation between the people and the railroad management might still bring about some solution to the problem. The tempers of the New Haven and of the Berkshire were too well known in this connection to make further overtures of much value. As a matter of cold fact, there just wasn't enough business in the territory, either actual or potential, to ever make the line pay its way,—and by now everybody must have known it.

The Huntington-Lee remained dormant, but physically intact, until 1923, when the Berkshire Street Railway's work cars went out over the line for the last time, and ripped up the rusting rails . . . at which time it must have been painfully apparent to all that the $3,000,000 which had been spent on New England's last major trolley construction project, had made the "Huckleberry Line" the most costly venture of its kind in the history of the Commonwealth. Ambitiously conceived, laboriously built, and finally reluctantly operated, against a bleak aura of disillusioned necessity, the "Huckleberry Line" with its two short seasons of active use, stands as a monument to thwarted corporate ambitions, to legal and political pressures and their constantly-changing alignments; to the unpredictable vagaries of legislative whimsy, and last but not least, to the gradually changing tastes in public transportation.

Nature, in its inexorable way, has during the intervening years, obliterated much of the work of the New Haven construction engineers, up through the Hill Towns. True, there are stretches where one can still follow the high fills and deep cuts of the old Huntington-Lee right-of-way, for miles; however in others, it has become so overgrown with trees and dense vegetation that the once well ballasted roadbed is difficult indeed to trace.

Only one of the five magnificent concrete arches is still intact today,—"Worden's Arch", where the line used to cut under Highway Route 20 near Jacob's Dream, at West Becket—and even that one has been almost completely filled in. Only by leaning far over the single remaining concrete balustrade at the highway level, can one still discern the top of the old arch, and make out the date "1912", cut by its proud builders into the stone. A single building, the former substation at Otis, is left standing today. It has been put

to use as a summer camp in more recent years. Solidly built of brick, it will probably remain as the last sad reminder of the Huntington-Lee for many years to come.

The several highways which had been elevated to pass over the trolley line, have since been restored to their original grade in most cases. The Becket-Otis quarry now hauls its granite out to market by truck, making use of, en route, about the only considerable stretch of the old Huntington-Lee trolley roadbed that is readily traversable by highway vehicles, today.

As this is being written, however, there are rumors afloat that the Commonwealth is giving thought to acquisition of a goodly portion of the old right of way for use in construction of a new east-west trunk highway in connection with current plans for the new Route 20 across the state.

If this should prove to be so, the costly-laid-out right of way that Charles S. Mellen once planned for the use of fast New Haven electric trains, soon after the turn of the century, but which was to come down to such lowly estate in its actual operation, may some day fulfill its destiny as an express transport thoroughfare,—but this time as a motorway, in keeping with the trend of the still changing times. It would seem to be a fitting sequel to the story of the $3,000,000 line that once gave the people of the isolated Massachusetts Hill Towns a vision of a new and golden era, that never quite fell within their grasp.

* * * * * * *

World War I was now over, and postwar adjustments were in order. High labor and material costs brought about the end of the five cent basic fare, which had been traditional since the 1890s. Zone fares were introduced, and one-man cars put on for the first time. A few Massachusetts electric roads had already fallen by the wayside including the Ware and Brookfield which had quit in 1918. Of those which survived, the Berkshire road took the greatest impact from economic dislocation. The brain child of Ralph D. Gillett, formerly of Westfield, the Berkshire had weathered many a storm, but the seven weeks' strike that tied up the entire system late in 1919 nearly brought disaster.

The late C. Q. Richmond, Berkshire general manager, succinctly expressed his company's predicament at a legislative hearing held in North Adams on April 15, 1920, a few months after the end of the strike, in the course of which he was called upon to defend charges of poor service, rundown equipment and rough road bed.

"The Berkshire Street Railway is like a man who has been on a three months' spree, trying to sober up in twenty-four hours," he said. "It can't be done. The company has worn itself out trying to give service. I feel like the organist of a church at Leadville during the wild west days, who was protected only by a sign which read: 'Don't shoot our organist; he's doing the best he can.'"

The winter of 1919-20, with respect to snowfall one of the most rigorous on record hereabouts, had not helped the Berkshire, nor any

of the other trolley roads in this area, for that matter. Successive blizzards had piled the snow into mountainous drifts. Out in open country where the wind had a clean sweep, it drifted in again faster than it could be cleared from the tracks. We heard of weary trolleymen spending as many as fifty-two continuous hours aboard a snowplow, trying to "break out" a line.

Bad as things were in the cities and towns, the interurban routes felt it the most. The Springfield-Worcester car line had been tied up for two months between Palmer and Southbridge, when it was finally reopened for through traffic late in March. Its opening, like many others, represented a signal tribute to neighborly co-operative effort, such as in Brimfield, where some sixty villagers including the minister turned out to help break out the drifts that were twelve to fifteen feet deep in places,—so that the trolleys, that were their chief link with the outside world, might run again.

Conditions improved somewhat during that year, and the trolleys got a new lease on life, to some extent. Costs were down, for one thing,—for the first time since the war. The Springfield Street Railway, which then had over five hundred cars, two-hundred-odd miles of operated trackage, and well over 1,000 employees on its payroll, made what was to be this area's last new trolley line extension in 1921,—out Carew Street for five miles through the rapidly-growing East Springfield district to Berkshire Street.

Generally speaking, the early 1920s had seen the all-time peak of trolley traffic and revenues, hereabouts. The trend was soon to turn sharply downward. The jitney menace had been met and overcome, but it was a temporary reprieve,—for the private automobile was not to be denied as a growing threat to the trolley cars.

One after another, the more important street railways of Western Massachusetts were turning to buses, either on their light-traffic lines, or in the inauguration of service into new areas that had not previously been served by public transportation. The Holyoke Street Railway started its first bus line in 1921, out West Dwight Street; the Springfield Street Railway's first bus route was an emergency shuttle line across the newly-opened Memorial Bridge in 1923, pending the installation of necessary track connections for the trolleys. It was shortly followed by several other lines into districts not served by the electrics. The Northampton Street Railway put its first buses on the Williamsburg run, in 1926, replacing the streetcars which had served that village for something over a quarter of a century. The Berkshire's first bus route was between Dalton and Wayside, in November, 1927, after flood waters in the upper Housatonic had damaged the bridge used by the Pittsfield-Dalton trolleys.

And so it went,—but the streetcar still dominated the field, when it came to handling heavy traffic loads, and the larger companies were still buying new cars.

Considerable change had taken place in basic car types between 1910 and the early '20s. The open cars being used in summer were good revenue producers, having an amazing passenger capacity, if

one includes the many standees who could crowd onto the running boards. However, popular as they were with the public, their accident ratio was usually high; furthermore, they represented an expensive duplication of equipment.

Development of the so-called convertible car, on which the side-panel sections could be removed in summer, and replaced by wire screening, marked an economical departure from the old open car,

(Photo courtesy The Holyoke Public Library)

Craft's Tavern, Holyoke — About 1910. Built in 1792

In original location, west side of Northampton Street between Old and New Eastampton Roads (Dwight Street and Beacon Avenue). Later moved two or three hundred feet southwest.

while still preserving some degree of the latter's most attractive feature. Convertible cars first came to western Massachusetts in World War I days, when the Springfield Street Railway bought them new from the Wason works. Holyoke bought some second-hand from New York in 1922,—and found that their roof-lines would have to be cut down in order to get them through the Cabot Street underpass!

The so-called semi-convertible cars came next, in which only the windows were removed in summer.

By 1919, with all emphasis being placed upon economy of operation, the Springfield and Berkshire properties were following a new national trend in transit with their adoption of the so-called Birney Safety Car, a single-truck, light-weight car operated by one man, and economical as to power consumption and maintenance expense. These

cars were built by the Wason car works in Springfield, which was one of several United States car builders to turn out hundreds of these cars to a standard basic design, up into the early '20s. They were not used elsewhere in Western Massachusetts, however.

With their hard wooden seats, and a short wheel base giving them a tendency to "bounce" even on reasonably smooth track, the Birney cars left something to be desired in the way of riding comfort, and they never became popular with the public. Considering the fact that some of the older and more stoutly built wooden cars were to remain serviceable for up to forty years, the Birneys lasted but a comparatively short time hereabouts, although a few of them remained in use on lightly patronized car lines in Springfield and Pittsfield for a dozen years. They saw their last service in western Massachusetts in the latter city in the late summer of 1932.

Meantime the trend in new construction had swung back to longer cars, with the Wason works outshopping the forty-six foot "jumbo" cars for the Springfield Street Railway late in 1923.* Representing, in part, the company's answer to the city's demand for better service on heavy-riding lines, these cars were to be about the most consistently dependable and efficient operating units for mass transportation ever used hereabouts. Rated as fifty-two-passenger cars, with respect to seating load, they had a tremendous capacity for standees, with their long side seats and wide "bowling alley" center aisle, and on occasion have been known to carry nearly three hundred revenue passengers. Even the largest of the old open cars, with the customers hanging on the running boards and standing between all the seats, had never done much better than that!

It was in the summer of 1923 that Western Massachusetts' largest street railway system was faced with the greatest emergency in its history up to that time.

The Springfield Street Railway had established its first motorbus line on February 2nd of that year, a temporary shuttle service across the new Hampden County Memorial Bridge, pending the widening of Vernon Street and completion of rail connections to the bridge, upon which the tracks had already been laid.

Controversial aspects of the Vernon Street widening plan had held up the laying of trolley tracks at the Springfield approach to the new bridge for some time. These differences had but recently been resolved when an unfortunate incident occurred which brought Springfield face to face with a major transportation crisis.

At 1:10 P.M., Saturday, September eighth, fire broke out in the sidewalk planking of the forty-seven-year-old North End Bridge connecting Springfield and West Springfield. Fed by a broken gas main, the fire was made even more difficult to fight because of the presence of electric light and power wires carrying up to 5,500 volts.

* Sold to Birmingham, Alabama, for further service in 1941, they were subsequently rebuilt as center-entrance cars.

The bridge was practically destroyed in less than an hour, leaving West Springfield without lights, telephones or trolley service.

The matter of the still incomplete approaches and connections to the new Memorial Bridge was now brought into sharp focus. Even before the fire in the North End structure had been extinguished, the street railway, working with the Springfield Department of Streets and Engineering, had begun the task of laying rails, setting poles and stringing wires through Vernon Street to the Memorial Bridge.

It was a monumental job, complicated by the fact that much of the one-hundred-three-pound rail to be used at Vernon Street was then lying at the street railway's Tubbs Hill yard in West Springfield. With the North End Bridge gone, trolley work cars could only reach this yard by a circuitous fifteen-mile route by way of Chicopee Falls and Holyoke. By shortest highway route, the distance was less than two miles, and it was decided to bring the rails over to Springfield by motor truck, dragging the rail through the streets behind the trucks. Before five o'clock on that Saturday night, a stack of new rail was at the scene of operation, and before midnight two huge loads of ties, brought around from West Springfield via Holyoke by the company's work cars, were at Main and Vernon streets, ready for unloading.

Cars from Holyoke, Mittineague and Westfield were soon being routed in over the Memorial Bridge, as far as its easterly end, which was as close to the city as they could reach. To help the hard pressed Springfield Street Railway in its attempt to provide some local service across the Connecticut, municipal authorities pressed Springfield jitney bus drivers into emergency duty on a route between Main and Fort streets, Springfield, and the West Springfield "Y" via the new bridge, at a seven cent fare. By that first Saturday afternoon, Jitney Supervisor Thomas H. Benton had six of these privately owned vehicles in operation on the route, with more in prospect.

Augmented by every available man that could be brought in from the Palmer and Westfield divisions, the Springfield Street Railway's crews labored night and day for nearly a week, even being fed on the job to save time.

The first track connection onto the new bridge was effected September twelfth, just four days after the North End fire, shortly after which the thirty-odd cars that had been marooned on the west side lines since the Saturday previous, were brought into the city along with work cars from the Holyoke quarry with much needed trap-rock ballast for further construction work.

With the completion of the second track connection, regular trolley service over Vernon Street and the new bridge began on Saturday, September fifteenth, barely seven days after the fire, and just in time to enable the street railway to handle the crowds for the Eastern States Exposition in West Springfield, which began the following day.

It had been fortunate indeed that a new bridge was already in place to take over the traffic burden upon the loss of the North End

structure; it was equally fortunate that the street railway had crews and materials so readily available for a project which was to have been undertaken before long anyway. However, it was largely through the resourcefulness and cooperative effort of municipal, trolley and other utility services that a race against time was won within a week, to greatly ease the impact of a situation that, under less fortuitous circumstances, would have represented an extended transit tie-up of major proportions.

The last trolley car had circled the Court Square loop a month before. A new Broadway-Vernon-Pynchon-Water Street trolley loop to replace Court Square as a terminal for various west side car lines, was still to be completed as part of the extensive Vernon Street project. However, the street railway was no longer faced with a compelling immediate need. This could wait for a few weeks.

The Ware & Brookfield had been shut down in 1918, and the little Conway road in 1921, but it was the abandonment of the Connecticut Valley three years later that represented the first sizeable reduction in the street railway mileage of Western Massachusetts,—and it was perhaps the first indication to many of us that the familiar trolley car which we had come to take as much for granted as the postman or the telephone, was something that was not always to be with us, after all.

It was on March 19, 1924, that D. P. Abercrombie, receiver for the Connecticut Valley Street Railway, announced that all passenger service between Greenfield and Northampton, and on the various branches, would be abandoned after the close of business, Sunday, March thirtieth. It was an announcement that posed a critical and immediate problem to the communities concerned; and some of them went into action right away.

The most important move was taken by the Greenfield Chamber of Commerce and the Turners Falls Board of Trade, in an attempt to salvage something in the way of continued service. Attention was called to the Transportation Area Act of 1920, under the terms of which one or more communities could unite to form a "Transportation Area", to operate under that specific title such transit properties as could be bought on the basis of actual value at the time of appraisal, but not at replacement cost. Operating deficits, if any, could be made up out of taxes.

An election was held on May 24, 1924, at which time the voters of Greenfield and Montague voted to retain, under new municipal management, the trolley service on the Greenfield-Turners Falls division of the bankrupt Connecticut Valley road. The vote (1,619 to 333), while not heavy, nevertheless adequately reflected the strong sentiment in favor of keeping the cars running, on this nine miles of track at least.

Thus, following the mandate of the electorate, the town of Greenfield along with the community of Turners Falls in the township of Montague, paid to the receiver of the Connecticut Valley Street Railway, $62,000 for property having a replacement value of $500,000.

In June, municipal credit was extended by means of a bond issue (Greenfield $70,000, Turners Falls $30,000) sufficient to purchase and operate the road as a Transportation Area under the provisions of the enabling Act of 1920. The surplus in the $100,000 fund was turned over to the trustees for working capital and much needed rehabilitation of the property.

Operation began under the direction of four trustees (two from each town) who were appointed by the selectmen. The first trustees of this, one of the few municipally-operated trolley lines in New England, were George W. Cary, chairman and executive officer, and J. B. Kennedy, treasurer, both of Greenfield; Charles F. Mosher, secretary, and Stuart Winch, vice chairman, of Turners Falls. Mr. Frederick A. Persons was appointed to the post of manager-superintendent by the trustees, a post which he still holds.

Efforts were also being made to save other portions of the bankrupt system.

Upon the proposal of the Northampton Chamber of Commerce, the Northampton Street Railway agreed to take over operation of the Connecticut Valley's Northampton-Hatfield line, a guarantee fund having been set up for the purpose. The Northampton company also took over the line between Northampton and Amherst. Thus, due to prompt energetic action by public-spirited groups in both the Greenfield and Northampton areas, nearly half of the Connecticut Valley road's mileage was saved from abandonment which such a short time before had seemed inevitable.

Improvements made with the advent of municipal operation in Greenfield included repairing and painting the Connecticut River trolley bridge at Montague City, welding of rails, rehabilitation of roadbed and overhead line, as well as the outmoded cars, two of which were fitted with new and comfortable bucket seats. An energetic ride-selling campaign was also introduced in the newspapers and by signs on the cars, which proclaimed such facts as these:

"Greenfield, Eastern Gateway to the Mohawk Trail"
"Turners Falls, the Home of Community Spirit"
"Ride Me and Save the Difference"
"Who am I? Your Willing Servant"
"Our Pride—Your Comfort"
"No Parking Worries Here"
"This Car is a Community Asset"

At anniversary times, such signs as "One Year Today" or "Two Years Today" were displayed, to remind the taxpayers that their $100,000 investment was still on the job.

There was one sign, however, that had to be discarded because small boys took it too literally. It read:

"Hop On—At Your Service"

It was not long before the Greenfield & Montague was grossing $80,000 a year, which was sufficient to pay operating expenses. For a small property, its million passengers annually looked impressive. Smart advertising, with appeals to public spirit, and extensive use of daily, Sunday and holiday passes,—all these things helped. The basic ten-cent fare was good in two zones, with a five-cent additional fare for each further zone. Tokens sold at the rate of twelve for fifty cents and they were good in any of the five zones. Perhaps the

Mark Hopkins House, Stockbridge

management's most effective fare merchandizing involved the sale of passes, transferable and allowing unlimited riding within their specified time limitations. A $1.00 weekly pass was good for two zones, a $1.50 pass in all five zones. Sunday, holiday and evening passes sold for twenty-five cents each. Except for a brief trial of the Sunday pass on the Springfield Street Railway in the summer of 1932, this was virtually the only instance of the adoption of this type of revenue producer by a Western Massachusetts trolley line,—and it was one that was well worth while.

The only other municipal operation of a trolley line hereabouts was that of the so-called Athol & Orange Transportation Area, which owed its origin to the total abandonment in 1924 of the Massachusetts Northern system, of which this line had formed the western portion. The circumstance here were somewhat similar to those which attended the demise of the Connecticut Valley road,—the urgent need of two

adjacent communities to salvage something from a bankrupt utility, plus the will to meet this need with prompt action. This case was different, however, in that a single municipality bore the burden of the financial outlay, amounting to $30,000, which was met by the town of Athol through the issuance of ten-year serial bonds.

The property taken over included 6.76 miles of track and thirty-four cars, many of which were in poor shape and were immediately junked, the rest being rehabilitated for further use. Track here was in better shape than in Greenfield, although some relocation of line was required in the town of Athol, in connection with state highway work, and which was paid for by the Commonwealth.

Management of the property was left in the capable hands of George S. Donley, who had been connected with the Northern Massachusetts and its predecessors virtually ever since the trolleys started here in the mid '90s, and who was to remain until the end.

Bus substitution was given some consideration here, but trial demonstrations had been unimpressive, and the municipality decided it would be best to keep the cars rolling. It was a decade later before the buses took over, having finally been found to be sturdy enough to negotiate the stiff twelve to fifteen per cent grade between Athol Center and the lower village, which the familiar green-and-cream trolleys had been climbing for nearly thirty years.

As time went on, the trolley roads were not the only ones to see the advantages of buses with respect to mobility of operation, and their ready adaptation to extension of routes into new territory without heavy expenditure. The major steam railroads in this area were doing the same thing. 1924 and 1925 saw the advent of the New England Transportation Company and the Boston & Maine Transportation Company, as bus-operating subsidiaries of the New Haven and the Boston & Maine respectively, which replaced unprofitable rail services of their parent companies and reached into new areas, including some that had once been served by now abandoned trolley lines. Both are still operating through this area today, although greatly expanded in scope during the past two decades. The Interstate, the Short Line, Pocumtuck Stages, Palmer Motor Coach and various other present-day bus operating companies also hold franchises in areas where the trolley once ruled supreme.

* * * * * * *

In an effort to bolster flagging revenues in their trolley freight and express departments, the Worcester Consolidated and Springfield companies in June, 1926, inaugurated a "freight container" service, copying a method of less-than-carload unit freight merchandizing that had been adopted on the steam railroads with some success. This innovation came a little late to be of much help, however, as the steady expansion of long-distance motor trucking lines was progressively eating deeper and deeper into trolley freight business. As a matter of fact, the advent of Prohibition had already dealt the trolley express a near-lethal blow, since the transportation of beer and hard liquors, along with flour, produce, milk, fresh fruits and

paper had been its basic sources of revenue, commodity rates for these products being attractively low. For the same reason, bulk sugar from the Boston refineries came into Western Massachusetts via trolley express. Jute was also hauled in some quantity between the Ludlow mills and the Bigelow-Sanford carpet factory at Thompsonville, Connecticut. Perhaps the most unique achievement of the trolley express had been the transportation of an entire circus menagerie, from New Britain, Connecticut, to Chicopee. It required five cars to bring the outfit, which included about everything except elephants, to the old Front Street lot in Chicopee, the trip being made without undue incident.

Some of the trolley express cars could be equipped with removable horse stalls, with which they could carry six horses per car. Agents of the trolley express were in attendance at the various fall fairs that were within reach of street railway lines, to solicit business from exhibitors or concessionaires with "Anybody want a car?" Sometimes all the equipment of an entry in the trotting park races would be carried by trolley express,—horses, sulkies and even the drivers!

In its heyday, the trolley express service had yielded as much as $150,000 in additional revenue to Western Massachusetts street railways annually. One of its features for fifteen years had been a through overnight service over a one-hundred-mile route between the Boston & Worcester Street Railway's Copps Hill freight terminal on the Boston waterfront, and Springfield by way of Worcester. Using the equipment of three companies and operating over the trackage of four, this was the longest scheduled through run for electric cars, either passenger or freight, in all New England. Three-car trains, making use of both motor cars and trailers, were used in this service when traffic warranted. For some time, through express cars were also operated between Springfield and Providence via Worcester, it being the only overnight rail service between these two cities.

The Springfield trolley express terminal on Bond Street had facilities for the loading of as many as ten cars at a time on its several tracks. By 1926, however, the station's facilities were no longer being fully used, and it seemed only a matter of time before the trolley express, which had been a major factor in Western Massachusetts transportation since 1912, would have to bow out of the picture.

Actually it was to have just a year more to go.

The handling of carload freight had also been an important feature of street railway service. Freight transfer connections with the steam roads were located at various points on the several Western Massachusetts street railway systems, including the otherwise-isolated Conway and Shelburne Falls & Colrain roads, most of the companies having certain cars equipped with regulation automatic couplers and train air-brakes, so that standard railroad freight cars could be delivered to off-line farm sidings and isolated industries located as much as a dozen miles from the nearest steam railroad. Coal, lumber, manufactured products, fertilizer and other bulk com-

modities were transported in this manner in carload lots to remote areas that would have been inaccessible otherwise.

For this reason, some electric freight services outlasted the more competitively-handicapped trolley express, in this region. However, as various passenger services were suspended, freight-handling facilities went too. Thus it was that the last electric trolley freight service in Western Massachusetts ended in 1939, this being in Springfield, where for nearly thirty years past, both the Hill and Watershops plants of the United States Armory had received railroad freight cars over the Springfield Street Railway from the New Haven Railroad's siding at Hickory Street. For most of this time, the heavy freight cars had rumbled over Springfield streets behind the government's own electric locomotive. Operation was unusually at night, when State, Hancock and Walnut streets were relatively free of other traffic. Following suspension of the Springfield service, the government's electric locomotive was sold to the Montreal & Southern Counties Railway in Canada, where it is still in use.

Until the resurfacing of Springfield's Dwight Street in the summer of 1947 necessitated removal of its last wood-block paving, there were wheel-tread marks in these paving blocks, extending from State Street to the corner curb at Old Dwight Street, that told a story. These marks represented the last visual evidences of a near-catastrophe of the early 1920s that received nationwide publicity at the time—"The Victoria Hotel wreck".

It was in the wee small hours of the night of August 31, 1921, that a heavily-loaded three-car trolley freight train from Worcester came hurtling down the long State Street hill out of control, split the switch at State and Old Dwight streets, and plunged headlong over the curb and into the corner of the Hotel Victoria, where one-hundred-odd guests were peacefully sleeping.

The first car twisted itself around the hotel's two steel corner girders, which fortunately prevented the collapse of the entire building; the second car was telescoped by the third, and along with the first, was virtually demolished. When the dust and smoke had cleared, the street was a shambles of wrecked cars among the meats, fish, provisions, drygoods and paper stock that had been their cargo, mixed with bricks and plaster from the corner facade of the five-story hotel, laid open to public gaze from curb to roof. Gas and water mains were broken, and sparks flew from severed wires. By the rarest of good fortune, no lives were lost, and but one hotel guest sustained injury, although he and his bed both narrowly escaped cascading through the gaping hotel wall down upon the debris in the street below. Miraculously the motorman and the express messenger, both of whom were in the forward car, escaped with superficial injuries.

If this runaway had taken place in the daytime, or if those two steel beams had not been squarely in its way, the Victoria Hotel accident might well have been Springfield's most tragic calamity—for all the potential elements of mass tragedy were here.

As it was: about $28,000 damage to the hotel block (which had been built a little over twenty years earlier to house Springfield's Young Men's Christian Association); two freight cars demolished and one badly damaged; perhaps $10,000 worth of merchandise spilled into the street, much of which was later salvaged; and most remarkable of all,—minor injuries to but three people!

Springfield has seen other but less spectacular trolley accidents from time to time (a falling tree that sliced down right through the roof of a crowded car on South Main Street, wrecking its interior, during the 1938 hurricane, was almost the last one), but with respect to fatalities, the safety record here has been remarkable. After nearly eighty years of continuous operation, during which its horsecars, trolleys and buses have carried a total of about one and a half billion passengers and operated some 300,000,000 miles (equivalent to over five hundred round trips to the moon), no person, except through his own negligence, has ever been known to lose his life while aboard a Springfield Street Railway vehicle as a revenue passenger.

In proportion to the volume of its business, this is undoubtedly the best record of any of the street railways of Western Massachusetts, although most of the others have had good safety records as well. Trolley accidents in this area have never resulted in mass fatalities as they sometimes have elsewhere. Aside from the Victoria Hotel wreck, about the only incident of this nature hereabouts to attract wide attention, occurred back in 1902, when the carriage of President Theodore Roosevelt was involved in a collision with a Pittsfield Electric Street Railway car on South Street, Pittsfield.

Neither the President nor Governor Winthrop Murray Crane, with whom he was riding at the time, received more than a shaking up in this distressing accident, although William Craig, presidential aide, was killed, and the carriage was virtually demolished.

One of the oddest accidents to affect the Springfield Street Railway did not even involve a trolley car. This took place December 24, 1912, when four hundred forty volts leaked from a trolley power wire on Front Street, Chicopee, to burn out all the circuits in the Springfield main telephone exchange!

From Rails to Rubber

Abandonment of the last trolley lines of the Hartford & Springfield Street Railway, in receivership since 1918, came in the summer of 1926, and represented the first break in what had been, for well over a decade past, a continuous trolley trackage from Boston to New York by way of Springfield.

The Hartford & Springfield, operated by its bondholders at the last, tried bus service briefly, but finally turned their properties and franchises over to other operators. A unique feature of the Hartford & Springfield's bus service was the separate smoking compartment in the rear section of the bus, in continuance of earlier practice, smoking compartments having been among the outstanding appoint-

ments of this company's through Hartford-Springfield trolley cars ever since they had been put on in January, 1902.

The disintegration of Western Massachusetts' interurban network was further accelerated by the replacement of the through Worcester-Springfield trolleys by buses operated under the same joint management, in 1927. With no electric cars then operating in Hampden County east of Palmer, the once extensive trolley express service of necessity became a further casualty of the change over.

House on Corner of Cypress Street and Gray's Avenue, Springfield

Demolished 1932. Here lived John Brown, 1848.

The prevailing trend with respect to street railway valuations by the late 1920s had been graphically illustrated by the collapse of the Hartford & Springfield Street Railway as an operating entity. It must have been thought-provoking indeed in 1926 to read about a traction property once valued at $2,000,000 being sold by Court order for a paltry $10,000 to its bondholders, who were the only bidders at the foreclosure sale; but that was exactly what happened to the Hartford & Springfield.

The courts had modified their 1914 decree against the New Haven Railroad's direct ownership of sundry Massachusetts trolley lines in 1920, and again in 1923. The decree was fully rescinded on November 20, 1925, whereupon the New Haven resumed direct control of these lines once more,—or such of them as still remained. It was now too late to save the interurbans, but the more profitable city

lines were given a better chance of survival. On December 6, 1926, the New Haven announced its authorization for a $2,000,000 rehabilitation program for the Springfield trolley system, involving extensive track renewals, double-tracking on Belmont Avenue and other streets, new cars for the busiest routes and new buses for the more lightly-patronized ones, among other improvements.

In 1927 an electric car had been built for the Springfield Street Railway which embodied many new, and at that time rather radical features of design. Developed under the direction of W. L. Harwood, engineer of power and equipment, and other Springfield Street Railway officials, this car had comfortable bucket seats, sloping plate-glass windshield front, a "skirt" concealing the upper part of the car trucks and various noise-reducing features. One of its most novel features was an accelerator-type foot operating control, which left both operator's hands free for making change or other purposes.

Instead of having half the motor weight upsprung on the axle, as in conventional practice, the entire weight of the motors was supported on the truck frame with rubber cushioning blocks. Connection to the underslung worm axles was accomplished through propellor shafts, and in conjunction with a differential to eliminate wheel slippage on curves, and thus tending toward quieter operation. Duralumin was used wherever possible in both underframe and superstructure, reducing the car's weight appreciably.

A great deal was hoped for this car, but it was not to be an unqualified success, among other things being a poor hill-climber. It was taken out of service in 1936 with the motorization of the West Springfield trolley line upon which it had been running for some time. Despite its shortcomings, it is safe to say that Springfield's "worm drive car" as it was called, but helped to pave the way for the further development of the modern streetcar.

Yet, when, a little later in 1927, the New Haven had the Wason works build an order of fifty new cars for the Springfield Street Railway, these cars did not embody the more radical features of Number 554. However, they were built for one-man operation, had comfortable seats and treadle-operated doors for rear exit.

New cars were also bought for the Berkshire road with the New Haven's money. The Greenfield & Montague Transportation Area added to the prestige of municipal trolley operation by buying four new cars from the Wason works in Springfield, which closed its doors shortly afterwards, to end nearly a century of car building.

The new cars built for these three Western Massachusetts roads in the late 1920s varied somewhat in style, but were all of double-truck, lightweight type and were fitted with comfortably upholstered bucket seats, one of the several features of automotive design which by that time had been found expedient for adoption by the trolley car. It is interesting to note that the earlier buses had similarly copied contemporary *street car* structural lines to some extent in *their* design.

The trend toward bus substitution of the more lightly-patronized lines continued, however, as the Springfield Street Railway took the last local trolleys off its Westfield division lines in 1925-26, and its Palmer division in 1927, though cars continuing to run from Springfield to Palmer until 1928, and to Westfield until late in 1931. In 1933 properties and franchises in the Palmer local area were sold to the Palmer Motor Coach Service, which took over bus operations through the territory of what had been the Springfield Street Railway's Palmer Division for some twenty-five years.

The impact of the 1929 depression, sandwiched in between disastrous floods of 1927, 1936 and 1938, dealt telling blows to the remaining trolley roads in the Connecticut Valley and the Berkshire area. The Springfield Street Railway declared its last dividend under New Haven management in 1931, in which year it gave up the downtown administrative offices which it had maintained at 145 State Street for a decade. During the early 1930s, employees had somewhat cushioned the economic shock of layoffs due to service curtailments and other forced economies, by instituting voluntary share-the-work plans which kept many on the payroll who would otherwise have been dropped. By the close of 1932, the Springfield Street Railway's gross revenues had fallen off to slightly more than half of what they had been in 1925.

Automobile registrations in Massachusetts, significantly, had passed the million mark in 1929, it being also the biggest yearly increase up to that time. Steam and electric lines alike felt the effect of this upward competitive spiral.

The parade into oblivion for the trolley car in Western Massachusetts, had now gotten well under way. "Last runs" over one line or another were being reported in the press with almost monotonous regularity. The Berkshire system which had been steadily whittling down its trolley mileage during the preceding three years, ran its last car on the Pittsfield-Dalton line in November, 1932, after which its best cars were shipped off to New Haven for further service there on the lines of the Connecticut Company.

Most of the Northampton Street Railway's car lines remained intact until December, 1933, with the last trolleys running on Christmas Day.

Greenfield was to bid farewell to its streetcars next.

In Greenfield, removal of the trolleys only awaited the installation of four-color signal lights on the Montague City Bridge across the Connecticut, along with control switches for the regulation of one-way motor traffic over the ancient wooden structure,—these to be thrown by the Greenfield & Montague bus operators as they approached the bridge.

When the last car left Greenfield for Turners Falls at 11:30 on Saturday night, July 7, 1934, it marked the close of nearly forty years of trolley service in Franklin County. In charge of one of the younger operators, Raymond Doran of Turners Falls, it had few passengers; but one of them was Herman Winterholder, of

Greenfield, who as a child of five had ridden the first car with his grandparents, at the time the line was opened thirty-nine years before.

In 1935 came receivership for the New Haven Railroad, which meant that its Springfield and Berkshire properties were in line for further drastic retrenchment.

Four years later the New Haven's interests in the Springfield Street Railway were acquired by interests identified with the present management, and committed to complete bus substitution. The Berkshire property, upon which bus substitution had already been fully effected, remained in New Haven hands, where it still is today.

One of the Greenfield & Montague's trolley structures still had a spectacular, though unscheduled role to play two years after the last cars were taken off; this was during the March, 1936, flood, the worst to hit the Connecticut Valley up to that time, in the course of which the abandoned trolley bridge and the ancient wooden highway bridge which crossed the Connecticut between Greenfield and Montague City, were both swept away.

The trolley bridge went out first, starting a destructive chain reaction that was to knock out every bridge but one between Greenfield and Sunderland.

Next to go after the trolley bridge was the century-old covered highway structure, the last of its kind spanning the Connecticut, and which until 1921 had also carried on its staunch roof the railroad tracks of the Boston & Maine's Turners Falls branch.

The combined wreckage of these two bridges, which had stood side-by-side for so many years without major mishap, swept downstream to knock out the New Haven Railroad bridge, one-half mile below; later that evening, the pounding of the cumulative debris from them all helped to take out the Sugar Loaf Bridge between South Deerfield and Sunderland, leaving only the Boston & Maine's Fitchburg Division bridge intact in this ten-mile stretch.

A once-familiar custom saw its last exemplification hereabouts in the summer of 1936, when the Holyoke Street Railway's five remaining fourteen-bench open cars, which had been kept intact for special or chartered trips, put in their last mileage. On two occasions during that summer, they came to Springfield, first to take Forbes & Wallace's employees, then Steiger's, to Mountain Park on their annual outing.

Once a spectacle too commonplace to be given even casual notice, the passage of these cars, the last of the open variety left in use in Western Massachusetts by that time, attracted considerable attention in Springfield. More than one oldster stopped to watch, with a nostalgic sigh, something that was not to be seen again,—open-bench trolley cars on Springfield's streets, filled with happy, pleasure-bent throngs. Before the end of August that year, even these last Holyoke open cars had gone to the junk dealer's torch.

When it came Holyoke's turn to say good-bye to its very last trolleys in 1937, there was a predominantly gay car-full of passengers

to ride down from Mountain Park on the final trip of Number 180, in charge of Motorman Tom Sheppard and Conductor Scott. The weather had been warm that Labor Day, and hundreds had gone to the Park for the dancing or to watch the holiday fireworks, in the evening. Business was so heavy that some of the cars were running with two-man crews, as they used to in the old days.

As Number 180, the last car from Mountain Park, rumbled down Holyoke's dark, deserted High Street in the wee small hours of Tuesday, September seventh, it seemed hard to believe that there wouldn't be a trolley wheel turning by the time most Holyokers got up, a few hours later.

There were no ceremonies, and but one last sentimental gesture to mark the passing of Holyoke's streetcars after half a century's service; that came when Motorman Sheppard turned over the operation of car Number 180 at the City Hall to William Doucette, the road's senior operator, who had been riding as a passenger. Doucette, who had been with the company since 1895, took the controller with a firm hand but the experiences of a busy lifetime must have coursed through his mind as he guided Number 180 on its last half-mile to the Bridge Street carbarn.

A few weeks later, this well-kept rolling stock with which the Holyoke Street Railway had once won national recognition for good maintenance practices, was put to the torch, up on the Mountain Park grade.

Even in Springfield, where the trolleys were making their last stand hereabouts, there were but three of its thirty-five one-time car lines left, by the early summer of 1940, these being the Forest Park-Chicopee Falls (Route Number 14-21); Belmont Avenue-Memorial Square (Number 12-11) and the Dickinson Street (Number 15) routes, the last-named line operating from Vernon Street and during weekday rush hours only. Plans for the bus substitution for even these last remaining lines had been formulated by the Springfield Street Railway early in June, and the Springfield evening papers which made the announcement on the thirteenth would doubtless have given the impending change-over more attention but for the fact that the war in Europe, in which this country was shortly to be directly involved, was taking a critical turn.

The last scheduled run of a Springfield trolley,—and the last such in Western Massachusetts—was made with the departure of the late "Saturday night" trip from the Vernon Street crossover, Springfield, for Chicopee Falls at 12:30 A. M., Sunday, June 23d. There was considerable hilarity among over-exuberant passengers, for some of whom this was just another opportunity to "let loose". But as car Number 544, piloted by operator J. J. Keane, rumbled back over the historic "Green Line" from Chicopee Falls towards the Hooker Street car house, one detected overtones of serious reflection upon the significance of this final run. When this car swung over the switch into the car house yard, a few minutes after two A. M., it marked the end of another transportation era for this

region, and very nearly fifty years to a day since it had been first inaugurated in Springfield.

Here and there one heard some old-timer saying, "Well, I saw them come, and I've lived to see them go".

A dinner to celebrate the complete motorization of the Springfield Street Railway got underway at the Highland Hotel at 2:30 that Sunday morning, shortly after the last car pulled into the yard. Street railway officials and civic leaders were in attendance. A magnificent "Trolley cake" was a feature of the banquet, although it was really the sleek new green-and-cream buses that were being glorified now. Everybody had a good time, it seems,—but it was all against the backdrop of grim reality and ominous foreboding; for the recording of the passing of Springfield's last trolley car on Sunday morning, June 23, 1940, had to share the headlines with the news of the surrender of France to Hitler's Germany; while in this country, a state of national emergency was being declared by President Roosevelt. The war was coming closer.

Disposition of the trolley cars that once roamed Western Massachusetts rails varied according to their age and condition. Most of the older cars went to the scrap metal dealer's torches after salvageable parts had been removed. Bodies of a few of these cars were sold intact, however, and may still be seen today in isolated localities where they have been put to use as summer camps.

According to news reports at the time, scrap steel from the cars burned by the Berkshire Street Railway in 1933 was to be used in fabricating the structure of the great San Francisco Bay bridge, which was shortly to be built.

The newer cars of the Berkshire road went to New Haven, Connecticut; those of the Greenfield & Montague were sold as far away as Sydney, Nova Scotia; Holyoke's best snow-sweepers went to Quebec; while fifty-nine of Springfield's newer cars found such widely scattered cities as Norfolk, Virginia, Birmingham, Alabama, and Montreal, Canada, as final haven for further active service. In Montreal some of them are still in use today.

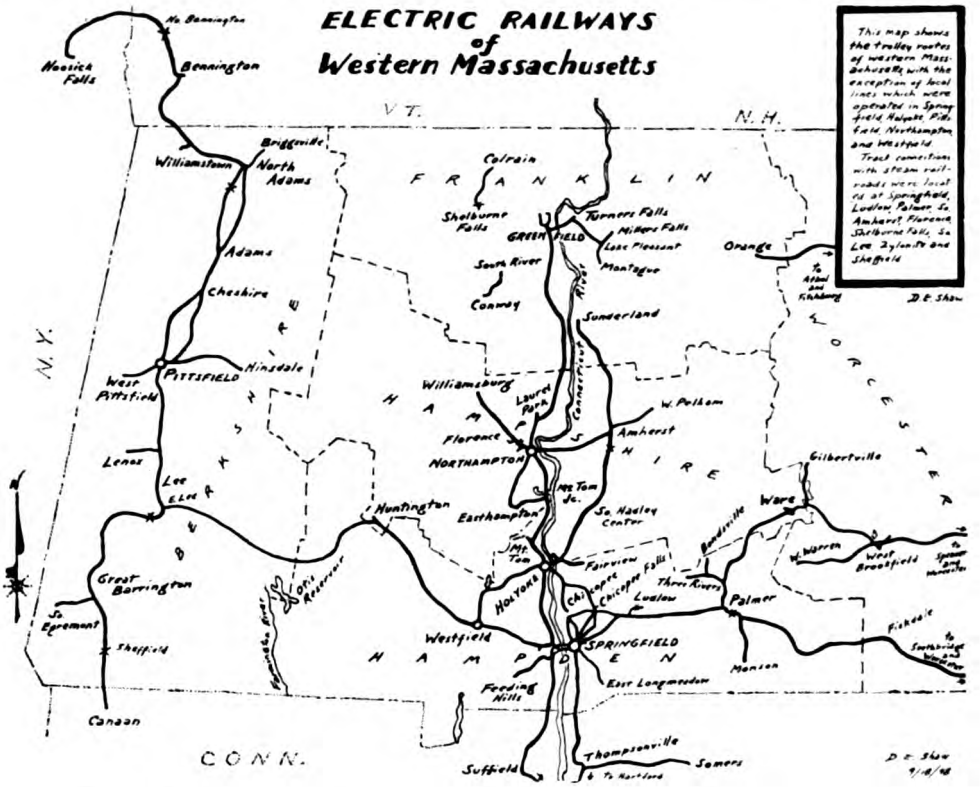
Much of the trolley rail remaining in the cities and towns of Western Massachusetts after Pearl Harbor projected the United States into full-scale war activity, was removed in the course of steel-salvage drives promoted by the Federal government. Springfield's streets alone had yielded nearly 10,000 tons of heavy rail to the war effort by October, 1944, when the work was completed there; in fact the record of this Western Massachusetts city was said to have been second only to that of Seattle, Washington, in this respect. There is still considerable trolley rail embedded in street paving in Pittsfield, Holyoke and Chicopee today,—very little elsewhere in Western Massachusetts.

There is now but one passenger-carrying street railway left in all New England—and its total mileage is less than that of

the dozen active trolley roads of Western Massachusetts alone, thirty years ago.*

It is thought-provoking indeed to speculate upon the fact that one can now travel from Newton Corner, on the outskirts of Boston, westward through Springfield and Albany to Rochester, New York, a distance of over four hundred miles, without seeing a streetcar.

Many of our city streets, which once reflected the steely glint of trolley tracks, seem much wider now, with the smoothness of their



new black-top macadam surfaces unbroken from curb to curb; but some of us still miss the businesslike pattern of these tracks and wires that had a symmetry all their own, and that seemed to almost articulately express a symbolism of vibrant power and potent-though-unseen energy; as we miss the rumble of the streetcars over their switches, like pulsating heart-throbs of Busy Industry itself, to which their passage set the tempo, and gave added color and significance.

There are still some remaining visual reminders of the Trolley Era in Western Massachusetts, aside from the abandoned tracks in

* Of the bare half-dozen electric railways remaining in New England in 1949, only the Metropolitan Transit Authority (formerly the Boston Elevated Railway) still operates trolley cars in passenger service.

a few scattered communities. The former carbarns at Springfield, Holyoke, Pittsfield, Northampton, Westfield and Greenfield are now in use as bus repair shops and garages. Inside most of them, as in the Springfield Street Railway's former Bond Street trolley express terminal which was also converted to a bus garage in the fall of 1927, the rails still remain today as mute evidence of their one-time functions.

The Army's engineers who secured the right of way of the old cable road up Mt. Tom from the Holyoke Street Railway and the Hampden-Hampshire Corporation in the summer of 1945, placed an aerial beacon on the summit; and for those who had sorely missed the cable road and the night brillance of the old Mt. Tom Summit House, it was somewhat reasurring to see a light again shining from that once famous eminence.

The combined "FM" facilities of radio stations WHYN, WSPR and WACE are now located here, and if you are rugged and your wind is good, it is again possible to climb the steep slope of the old cableway to the top. But one has to work hard indeed to earn enjoyment of the breath-taking views that you could once get sitting down, for the price of a twenty-five cent round-trip ticket on the *Elizur Holyoke* or the *Rowland Thomas*.

The Standard Oil Company now owns much of the right of way of the former Springfield-Worcester trolley line, lying both east and west of Palmer, which it purchased in 1931 for its Springfield-Providence oil pipe line, with forty-two parcels of land involved in a single sale.

Earlier,—in 1926,—the Commonwealth had acquired title to that part of this once lengthy interurban route which extended up the long westerly slope of Foskitt's Hill in Brimfield, for its new Route 20 highway, the present westbound lane of which now lies squarely upon the old trolley location for a distance of several miles here.

However, there are still miles upon miles of abandoned right of way stretching through the woods and fields of Western Massachusetts, remindful of the interurban trolley that is forever gone from here,—gone along with the moods and manners, customs and philosophies of what history may some day prove to have been the Golden Era of mankind. At least, looking backward from the uneasy threshold of the Atomic Age, one senses that there might have been some stabilizing cosmic relationship between the staunch and dependable trolley car and the relatively sane and deliberate era in which it flourished.

Be that as it may, the day of the trolley will not be forgotten by those who were fortunate enough to have grown up in it; while for younger generations, it survives at least through the sleek modern buses of five Western Massachusetts street railways of other years, which still carry the old familiar company names on their letter-boards, as they ply our city streets and country highways, the standard-bearers of dependable public transportation that has served this area without basic interruption for a century past.

A List of the Horse, Cable and Electric Railways of Western Massachusetts

Including both Operating and Holding Companies—in Hampden, Hampshire, Franklin and Berkshire Counties

Amherst & Sunderland Street Railway

Amherst to Sunderland, to South Amherst and to West Pelham (Orient Springs); the first portion of this electric road opened for service in 1897, with several later extensions. Connection was made at "The Notch" with the cars of the Holyoke Street Railway in 1902, by means of the newly-built Hampshire Street Railway's line (which see).

The Amherst & Sunderland was acquired by the Holyoke Street Railway in 1907, which latter was to operate through trolleys from Holyoke to Amherst until 1932, when buses were substituted. The Holyoke Street Railway still operates buses into Amherst today.

Athol & Orange Street Railway

Athol to Orange; began operation as an electric railway in 1894; in consolidation with the Gardner, Westminster & Fitchburg Street Railway it became part of the Northern Massachusetts system (which see) in 1913.

Athol & Orange Transportation Area

Athol to Orange; this municipally-owned trolley line began operation following suspension of service by the bankrupt Northern Massachusetts Street Railway system in 1924, at which time the Town of Athol authorized a $30,000 bond issue under the provisions of the Transportation Area Act of 1920, to purchase and support operation of this seven-mile segment of the former Northern Massachusetts road, most of which was in Worcester County.

Trolley service was operated between the Athol Fair Grounds, Athol Center, Athol and Orange until 1933, at which time streetcar service was abandoned on the property and the franchise transferred to the Gardner & Templeton Street Railway, which substituted a bus service here which it still operates.

Berkshire Street Railway

Incorporated in 1901, built and opened in 1902, the Berkshire road was a project of the late Ralph D. Gillett who had acquired mill interests in the Pittsfield area which were not then served by the Pittsfield Electric Street Railway and which needed transportation facilities. The two companies were to give a partially competitive service in Pittsfield and vicinity until 1910, when the Pittsfield Electric, along with the Hoosac Valley Street Railway, were both merged into the Berkshire system.

Having early come under New Haven Railroad control, the Berkshire Street Railway was operated in conjunction with the lines of the New Haven-owned New England Investment & Security Company for a time.

With about one hundred fifty-five miles of track at its peak of operation, the Berkshire system between 1913 and 1927 extended from

Pierson House, Richmond

Canaan, Connecticut, north through Berkshire County, Massachusetts, to Bennington, Vermont, and Hoosick Falls, New York, being the only electric railway in the United States operating in four states.

About 1910, political pressure for new trolley line construction in the Hill Towns of Western Massachusetts caused the legislature to specifically validate the New Haven Railroad's direct ownership of the Berkshire system in order to bring this about, although running counter to current policy in so doing. The Berkshire has been directly controlled in this manner ever since, being now the only remaining transit property in Massachusetts to be owned by the New Haven Railroad.

The Berkshire Street Railway gave up its last remaining trolley service in 1932, now operating buses exclusively in Pittsfield and North Adams, as well as through most of the rural Berkshire County areas, which had once been served by its trolleys, although it no longer operates outside the state.

Connecticut Valley Street Railway

This company represented the consolidation, in 1905, of the Northampton & Amherst Street Railway; the Greenfield, Deerfield & Northampton Street Railway, and the Greenfield & Turners Falls Street Railway.

Serving the communities of Greenfield, Northampton, Amherst, Turners Falls, Millers Falls, Montague and intermediate points, the Connecticut Valley Street Railway was for some years part of the extensive traction holdings of the Massachusetts Consolidated Railways (which see).

Following receivership in 1921, the forty-seven-mile Connecticut Valley road suspended all service in the spring of 1924, being the first sizeable Western Massachusetts street railway to be abandoned as an operating entity; however, certain segments of its route were subsequently acquired and operated by the Northampton Street Railway and the Greenfield & Montague Transportation Area, the last named being especially created for this purpose (see separate listings for these companies).

Consolidated Railway Company

This was a Connecticut corporation which had been organized in 1901 as the Thompson Tramway Company, becoming by change of name in 1902, the Worcester & Connecticut Eastern Street Railway and in 1904 taking the title of the Consolidated Railway, and under which were to be briefly merged the various street railway holdings of the New Haven Railroad in Connecticut, and to some extent, elsewhere.

The significance of the Consolidated Railway, as far as Western Massachusetts is concerned, lies chiefly in the fact that it was the initial vehicle through which the New Haven Railroad acquired the Springfield Street Railway in 1905, to bring to an end the latter's thirty years of local ownership and control.

The Consolidated Railway was directly merged into the New Haven Railroad in 1907, the latter assuming the Consolidated's corporate obligations as well as those of its numerous constituent companies; the operation of the Springfield Street Railway was then turned over to another New Haven subsidiary, the New England Investment & Security Company (which see).

Conway Electric Street Railway

The first electric railway in Franklin County, with a route from Burkeville northward through Conway Village to Conway Depot and South River, this road began operation in April, 1895. It maintained

both a passenger and freight service, with freight traffic connections with the New Haven Railroad's Shelburne Falls Branch at Conway Depot, and with the Boston & Maine's Fitchburg Division at South River station. From 1900 to 1916 it also ran the lighting business for the town of Conway.

Control of the Conway Electric Street Railway was acquired by the Boston & Maine in 1908, by virtue of assigned lease of the Fitchburg Railroad, which had previously secured control of the Conway road's stock.

When its seven-mile line ceased operations in 1921, it represented the first complete abandonment of a Western Massachusetts street railway, which was to leave its principal community without some other form of scheduled rail service.

Greenfield & Deerfield Street Railway

Build and opened in 1901-02 as an electric road to connect Greenfield with Deerfield and South Deerfield, this company was consolidated in 1903 with the Greenfield, Deerfield & Northampton Street Railway (which see below).

Greenfield, Deerfield & Northampton Street Railway

Chartered in 1902 to build a through electric railway line between Northampton and Greenfield.

The original Greenfield & Deerfield Street Railway was consolidated with this company in 1903, and through service was opened by the Greenfield, Deerfield & Northampton between these towns early in that year, cars operating over its own and the connecting lines of the Northampton & Amherst Street Railway and the Greenfield & Turners Falls (which see).

In 1905 all three above-named roads were consolidated to form the Connecticut Valley Street Railway, with a total trackage of nearly fifty miles.

Greenfield & Montague Transportation Area

A municipal electric railway operation financed by the townships of Greenfield and Montague in 1924, under the provisions of the Transportation Area Act, to take over the defunct Connecticut Valley Street Railway's former trolley line between Greenfield and Turners Falls, along with certain properties and equipment, and the local trackage in Greenfield itself. Streetcars were operated over this nine miles of road until 1934, when buses were substituted under the same name and management, and they are still so operated today.

Greenfield & Turners Falls Street Railway

Began operation in 1895 as an electric railway, connecting Greenfield and Turners Falls; absorbed the Montague Street Railway in 1896, to extend its operations to Lake Pleasant, Millers Falls and Montague.

This company was consolidated with several others to form the Connecticut Valley Street Railway in 1905.

Hampshire Street Railway

Built in 1902 to connect the lines of the Amherst & Sunderland Street Railway and the Holyoke Street Railway, which were separated by a four-and-one-half-mile stretch from South Amherst through "The Notch" (Mt. Holyoke) to South Hadley Center.

The road was leased in 1905 to the Holyoke Street Railway, which purchased it outright, along with the Amherst & Sunderland road, in 1907.

Hampshire & Worcester Street Railway

First opened as an electric railway in 1901, this company's lines extended from Ware to West Brookfield, with a branch from Ware to Gilbertville. With the greater part of its line in Worcester County, this road formed the first connecting link between the street railways of the central and western portions of the state, in 1902.

Sold at receiver's sale in 1905, this property was reorganized in 1905 as the Ware & Brookfield Street Railway (which see).

Highland Street Railway

Organized and built as a horse railway in 1894, this company operated a two-mile line extending from the terminus of the Woronoco Street Railway track at Pine Hill Cemetery, out Western Avenue to Woronoco Park.

Compressed-air cars were also briefly operated experimentally over the tracks of this company, which was consolidated with the larger Woronoco Street Railway in 1905,—through which merger, however, the officers of the Highland road were able to secure financial control of the Woronoco company, and guided its destinies from that point on.

Holyoke Street Railway

Built in 1884 as a horse railroad, and electrified in 1891, this company operated its cars throughout the City of Holyoke and to various neighboring towns, as well as maintaining a jointly operated through car service from Holyoke to both Springfield and Westfield, in conjunction with the Springfield Street Railway; and from Holyoke to Northampton with the Northampton Street Railway. With some seventy-three miles of operated trackage at its peak, the Holyoke Street Railway was the third largest street railway enterprise in Western Massachusetts.

The Mt. Tom Railroad, a scenic electric cable incline (1897-1936), was controlled by the Holyoke Street Railway, which operated the road under lease. The latter still operates beautiful Mountain Park, a four hundred-acre tract on Mt. Tom's easterly slope, and now the sole remaining street railway-owned park in Western Massachusetts.

The Holyoke Street Railway, which discontinued its last trolley service in 1937, is still engaged in transportation service on a large scale, with an extensive bus network reaching into much of its former trolley territory, and several additional routes into areas which its electric cars had never served.

Hoosac Valley Street Railway

First incorporated as the Hoosac Street Railway, and built as a horse railroad in 1886, this company's lines were electrified in 1889, making the Hoosac Valley the first commercially-operated electric railway in Western Massachusetts, and one of the first in New England.

Its original line extended from North Adams to Adams, with later extensions south to Cheshire, north to Briggsville and west to Williamstown and the Massachusetts-Vermont state line at Sand Springs, where a connection was later established with the Bennington & North Adams Street Railway, a Vermont company.

The Hoosac Valley Street Railway had twenty-seven miles of track by 1905, when its final extensions were opened. Having been leased to the Berkshire Street Railway in 1906, the Hoosac Valley was already under the operating control of New Haven Railroad interests when, in 1910, together with the Pittsfield Electric, it was consolidated into the extensive Berkshire system.

Although it had not operated under its old corporate title for thirty-eight years, the name of the Hoosac Valley Street Railway can still be found in the current financial statement of the New Haven Railroad, which continues to carry $152,000 of the Hoosac Valley's six per cent bonds, due in 1949, as a listed investment.

Indian Orchard Railroad

Incorporated in 1849, this mile-long road has a historic background all out of proportion to its size; for while it was built by the Indian Orchard mills primarily to provide a freight outlet for the mills, the Indian Orchard Railroad was very likely the first company holding a bona fide railroad charter to operate a passenger horsecar service anywhere in New England.*

Completed in the very early 1850s, it connected the main line of the Western Railroad (now the Boston & Albany) with the mills along Pine Street and on the south bank of the Chicopee River at Indian Orchard. Northbound, railroad freight cars as well as the company's lone horsecar, coasted down hill by gravity; southbound, and up the grade, they were hauled by horses.

* The first passenger horsecar to actually run in New England may have been an old Fitchburg Railroad coach which in 1852 was put on what was to be a briefly-operated line between Harvard Square, Cambridge, Massachusetts, and the Union Square (Somerville) Station of the Fitchburg Railroad. This was an unchartered operation, however. The first chartered street railway, aside from the Indian Orchard Railroad, was the Dorchester & Roxbury Railroad, which was given a Massachusetts charter in 1852.

During the 1870s, the line was leased to the Chapman Valve Manufacturing Company, which purchased it outright in more recent years. Operation of the passenger horsecar was discontinued during the '80s. With its route still basically unchanged after nearly a century of operation, this road is in use today, providing a freight connection to the industries located between the Boston & Albany's main line at Oak Street and the Athol Branch of the same railroad, at Indian Orchard. The road is still owned by the Chapman Valve Manufacturing Company, while a one hundred fifty horsepower diesel switching locomotive, successor to the several small steam locomotives which had been operated earlier, has for the past few years been providing the motive power for hauling freight cars over what had once been this area's first horse railroad.

Massachusetts Consolidated Railways

The holding company for the affiliated Connecticut Valley Street Railway, the Concord, Maynard & Hudson Street Railway and the Northern Massachusetts Street Railway, representing about one hundred ten miles of trackage in all, over half of which was in Worcester and Middlesex Counties.

Taking the above name in 1913, the Massachusetts Consolidated Railways went into the hands of receivers in 1921, shortly after which its various properties were abandoned. (See under Connecticut Valley Street Railway and Northern Massachusetts Street Railway.)

Montague Street Railway

Incorporated for operation as an electric railway in 1895, to connect Millers Falls with Lake Pleasant and Turners Falls, this seven-mile road was first opened in June of that year.

It was merged with the Greenfield & Turners Falls Street Railway in 1896, for which latter company the further extension from Lake Pleasant to Montague Village was built in 1899. (See under Connecticut Valley Street Railway for later history.)

Mount Holyoke Cable Railway

This unique railway, first opened in 1854, climbs the west slope of Mt. Holyoke on a thirty-eight per cent grade, from the Half-way House to the Summit House. When first opened, its cars were propelled by a horse that walked around in a circle hitched to a cranked mechanism located at the Half-way House, which by rope and pulley, propelled the cars. Steam power was substituted in 1856, and electric cable operation was adopted in 1926.

This six-hundred-foot line, said to be the only mountain railway in existence to be completely enclosed throughout its length, has running beside it the longest single flight of stairs in the world. Although the railway has not been operated since 1943, it is still intact, including its little cars built in 1867, and a move for its reopening is now

under way. The resumption of service on this scenic railway, the only one of its kind in the world, would indeed be a boon to the development of Mt. Holyoke, a state reservation since 1940, following its presentation to the Commonwealth by Joseph A. Skinner of South Hadley.

Mt. Tom Railroad

A cable electric incline railway, built in 1897 up the easterly slope of Mt. Tom. This road, which was operated under lease by the Holyoke Street Railway, which controlled its stock from the beginning, used two electric cable counter-balanced cars on the mile-long incline, which had a maximum grade of twenty-one percent. Connections were made at the Mt. Tom Lower Station with the trolleys of the Holyoke Street Railway. With its breath-taking views en route, and from the summit, a trip on the Mt. Tom cable cars was a "must" for every Connecticut Valley tourist for nearly forty years.

In connection with plans then being made for complete substitution of buses for the Holyoke Street Railway's trolleys, the Mt. Tom cable road was abandoned at the expiration of the lease in October, 1936. However, it was not until the fall of 1938 and the early months of 1939 that the line was dismantled.

New England Investment & Security Co.

Organized in 1906, this was the holding company for the New Haven Railroad-owned trolley lines in Massachusetts, most of which the New Haven had earlier held for a brief time through the medium of the Consolidated Railway (which see).

The New England Investment & Security Co., with principal offices at Springfield, for years exercised corporate control over a network comprising over five hundred miles of street railway lines, the largest of which were the Worcester and Springfield systems.

After many legal vicissitudes, the New England Investment & Security was finally liquidated as a corporate entity in 1939, by which time the New Haven Railroad had disposed of all of its Massachusetts trolley properties except for the Berkshire Street Railway which it still holds.

Outstanding shares of "New England Investment & Security Company—1927" preferred stock have been made exchangeable for new shares of New Haven stock, in accordance with the current financial reorganization of the latter, and validated by United States District Court order of April, 1948.

Northampton & Amherst Street Railway

An electric railway built to connect Amherst, Hadley, Northampton and Hatfield, the first part of this company's road was opened for service in 1899, its passengers crossing the Connecticut River between Hadley and Northampton by ferry prior to the opening of its new

1,288-foot steel bridge, in 1901. This is said to have been the longest bridge in the world to be used exclusively for trolley cars.

The Northampton & Amherst was consolidated with the Greenfield, Deerfield & Northampton and the Greenfield & Turners Falls in 1905 to form the Connecticut Valley Street Railway (which see).

Titus Deming House, South Williamstown

Northampton Street Railway

Built as a horse railway in 1866, later extended and electrified in 1893, this company at the peak of its trolley operations had about thirty-five miles of track in Northampton, Williamsburg, Easthampton, Hatfield, Hadley and Amherst. In addition to its local service to these communities, the company operated a joint through car service to Holyoke with the Holyoke Street Railway, with which it connected at Mt. Tom Junction. At certain times, through cars were also operated to Springfield.

Since 1912 the Northampton Street Railway has been closely affiliated with the Holyoke property. In 1924 the former car lines of the Connecticut Valley Street Railway between Northampton and Hadley, Amherst, Laurel Park and Hatfield were acquired by the Northampton Street Railway.

This company, which substituted buses for its streetcars in 1933, is now the oldest concern in the local transportation business in

Massachusetts, having operated continuously for over eighty years without material corporate change.

Northampton & Williamsburgh Railroad

First opened between Northampton and Florence in 1866, this was the first horse railroad in Western Massachusetts to be built for the convenience of the general public, rather than for semi-private use.

By change of name, this company became the Northampton Street Railway (which see) in 1873.

Northern Massachusetts Street Railway

Organized in 1913 as a merger of the Athol & Orange, the Gardner, Westminster & Fitchburg and the Templeton Street Railway, all but three of the forty-seven-odd miles of track operated by this company were in Worcester County.

The cars of the Northern Massachusetts road for some time operated through from Orange to Fitchburg without change,—a distance of about thirty-five miles.

Controlled by the Massachusetts Consolidated Railways (which see), this road went into receivership in 1921, and went out of business in 1924. At that time most of its line was abandoned, although certain segments were acquired and continued in operation by the Athol & Orange Transportation Area (which see) and the Templeton & Gardner Street Railway.

No streetcars have been operated over any part of the former lines of the Northern Massachusetts Street Railway since 1933, when the Athol & Orange Transportation Area surrendered its franchises to another company for bus operation.

Palmer & Monson Street Railway

Began operation in 1898 as an electric railway, which was from time to time extended, and eventually connected Palmer, Three Rivers, Bondsville, Ware and Monson.

The name of this company was changed in 1901 to the Springfield & Eastern Street Railway (which see).

Pittsfield Electric Street Railway

Incorporated in 1890, this company was successor to the Pittsfield Street Railway (which see). It began operation of its first electric cars in 1891.

The Pittsfield Electric Street Railway operated lines from Pittsfield to West Pittsfield, Lanesboro, Cheshire, Dalton and Hinsdale, in addition to local routes in the City of Pittsfield, about thirty miles of track in all.

In 1910 its capital stock was acquired for the account of the New Haven Railroad, and with the Hoosac Valley road, it was consolidated into the Berkshire Street Railway system in that year.

Pittsfield Street Railway

Opened as a horse railroad, in 1886, this company's line extended from the Boston & Albany Railroad Station in Pittsfield to Pontoosuc Lake, a distance of three miles. It was succeeded in 1890 by the Pittsfield Electric Street Railway (which see), which operated the horse-cars until electricity was adopted as a motive power in the following year.

Shelburne Falls & Colrain Street Railway

An electric line, with seven and one-half miles of track, connecting Shelburne Falls with the villages of Shattuckville, Griswoldville and Colrain, all in Franklin County. First opened in 1896, this was one of the few Western Massachusetts street railway properties to remain independent of outside control.

Both passenger and freight service was given by this road, which had a connection with the Boston & Maine at Shelburne Falls for the interchange of railroad freight cars.

The road was abandoned in 1927.

Springfield & Eastern Street Railway

Successor to the Palmer & Monson Street Railway by change of name in 1901, this company's original lines extended from Palmer to Bondsville, Three Rivers, Ware and Monson; in 1901 it built an extension from Palmer to the Wilbraham-Springfield town line at Ludlow Bridge, where it connected with the Springfield Street Railway.

The road came under New Haven control with its lease to the Springfield Street Railway in 1905; following this, another extension of the Springfield & Eastern, financed with New Haven money, was built east from Palmer to the Brimfield-Sturbridge town line, to a connection with recently-completed trackage of the Hartford & Worcester Street Railway. The latter was shortly taken over by the New Haven-owned Worcester & Southbridge Street Railway, and a through line was opened in the summer of 1907 between Springfield and Worcester, which for the next twenty years was to remain as the longest regularly-scheduled, year-round interurban trolley line in New England.

The Springfield & Eastern was absorbed into the Springfield Street Railway's corporate structure in 1910, its various lines then becoming the latter's Palmer Division. At the time of consolidation, the Springfield & Eastern had forty-four miles of track.

Springfield Railway Companies

A holding company originally organized in 1905 to acquire for New Haven Railroad account, a majority of the capital stock of the Springfield Street Railway and the Springfield & Eastern Street Railway companies. Most of this stock was held by the New England Investment & Security Company (which see) for some years.

Under a renewal of the original declaration of trust, twenty-one years later, the "Springfield Railway Companies—1926" was formed, its preferred shares, guaranteed by the New Haven, representing the bulk of the original Springfield Street Railway common stock. The outstanding preferred shares of the Springfield Railway Companies—1926 were later given the status of an unsecured claim against the then bankrupt New Haven. After some years' delay, these shares are now subject to exchange, pursuant to an April, 1948, order of the United States District Court, in connection with current refinancing of the reorganized New Haven Railroad.

The Springfield Railway Companies' own common stock, rendered virtually valueless when the New Haven went into receivership, has since been cancelled.

Springfield Street Railway Company

First opened as a horse railway in 1870, and electrified in 1890-93, this became the largest street railway enterprise in Western Massachusetts, operating at its peak more than five hundred cars over two hundred eight miles of track, including five miles which it operated for the Connecticut Company (the latter's Suffield Division,* extending from Kent's Corner, Suffield, north to the Massachusetts state line at Agawam).

The Springfield Street Railway operated through cars to Worcester in conjunction with the Worcester Consolidated Street Railway; and to Holyoke in conjunction with the Holyoke Street Railway; the Hartford & Springfield Street Railway entered Springfield over two routes from Connecticut points, using Springfield Street Railway tracks north of the state line. For a brief time (1917-18) there was a connection between the Springfield and Berkshire Street Railway at Huntington.

Following its acquisition of the Western Massachusetts, Woronoco and Springfield & Eastern companies, the Springfield Street Railway operated three separate divisions; one in Springfield and vicinity, one in Palmer and one in Westfield. Its operated lines extended east to the Brimfield-Sturbridge town line, west to Huntington, south to the Connecticut state line and to Suffield, and north to Chicopee, Chicopee Falls and on the west side of the river, to the Holyoke-West Springfield town line.

The company was operated under independent local management until 1905, when control of the property was acquired by the New Haven Railroad. Management of the property was vested first in the name of the Consolidated Railway, later through another New Haven subsidiary, the New England Investment & Security Company, where it remained for some years.

Technical management of the property passed into the hands of trustees in 1914, by court order, being returned to the New Haven's

* Originally opened in 1902 as the Suffield Street Railway, which was acquired by the Consolidated Railway for New Haven Railroad account in 1905.

control in 1925. The latter went into bankruptcy in 1935, and its Springfield stock was ordered sold at public auction in 1939.

Reorganized in 1939, with the injection of outside capital furnished by interests committed to complete bus substitution, the Springfield Street Railway ran its last streetcars in June, 1940. It was the last remaining trolley operation in Western Massachusetts by that time.

The company now enjoys a greater degree of local control under its present management as an all-bus operation than it has enjoyed since 1905; and in 1948 has paid its first dividend in seventeen years. It currently operates some 220 buses over 27 routes on its Springfield and Westfield divisions.

Ware & Brookfield Street Railway

With part of its twelve-mile road in Worcester County, this company was a successor, through reorganization, of the Hampshire & Worcester Street Railway in 1905. Operating between Ware and West Brookfield, with a branch from Ware to Gilbertville, its line barely entered Hampshire County on its westerly end.

Connection was made with the Warren, Brookfield & Spencer Street Railway at West Brookfield, and although there was no physical connection, the Ware & Brookfield's track paralleled that of the Springfield Street Railway through the Main Street of Ware.

The Ware & Brookfield operated its lines until 1918, when it was sold at auction. It was the first electric railway in Western Massachusetts to be abandoned.

Western Massachusetts Street Railway

Opened as an electric road in 1905, between Westfield and Huntington, its ten-mile line was leased in 1906 to the larger Woronoco Street Railway. In 1907, the Springfield Street Railway, having previously leased both properties, brought about the merger of the two by exchange of stock, the combined property taking the name of the Western Massachusetts Street Railway.

Both roads were finally absorbed into the Springfield Street Railway in 1909, becoming the latter's Westfield Division, which it still is today, although buses replaced the last Westfield trolleys in 1926.

Woronoco Street Railway

Built as a horse railroad in 1891, this Westfield company was to be the last such to be constructed in Western Massachusetts—and (in 1895) it was the last to give way to the electric cars. Compressed-air cars, using the so-called "Mekarski system" were tried out experimentally over the Woronoco's tracks in 1894-95, Westfield being one of a bare half-dozen places in the United States where such operation was ever attempted.

The Highland Street Railway was merged with the Woronoco road in 1895, shortly after which the combined lines were electrified.

In 1906 the Woronoco leased the Western Massachusetts Street Railway and both, in turn, were leased to the Springfield Street Railway later in the same year. In 1907 both were combined under the name of the Western Massachusetts Street Railway, and in 1909 their twenty-seven miles of trackage was taken into the Springfield system, after which they lost their corporate identity.

* * * * * * * *

In addition to the foregoing, the following street railways operated their cars into Western Massachusetts from other areas:

Bennington & North Adams Street Railway

(A Vermont company), operated through cars into North Adams from Bennington, Vermont, using the tracks of the Hoosac Valley Street Railway south of the Vermont-Massachusetts state line, between 1907 and 1909 or 1910. In later years this was a part of the extensive Berkshire Street Railway system (which see).

Hartford & Springfield Street Railway

(A Connecticut corporation); organized as successor to the Enfield & Longmeadow Street Railway in 1901, the Hartford & Springfield operated through cars from Hartford, Connecticut, over two routes into Springfield, using the tracks of the Springfield Street Railway as well as the latter's crews on its cars, from the Connecticut state line into Springfield.

Through cars to Springfield were also operated from Somers, Connecticut, via Thompsonville for some years by this company. Its last trolleys were taken off in 1926.

Worcester & Southbridge Street Railway

Inaugurated a joint service with the Springfield Street Railway in 1907, for through car operation between Springfield and Worcester.

Worcester Consolidated Street Railway

Beginning in 1908 or 1909, this company took over the above-mentioned joint service with the Springfield Street Railway. For the next twenty years, through cars of both companies were operated between Worcester and Springfield, after which they were replaced by bus service.

* * * * * * * *

One other railroad operation in the western counties, although somewhat beyond the scope of a discussion of street railways as such, was sufficiently related to them, with respect to its method of propulsion, to merit brief mention here,—particularly since it outlasted all the trolley lines in this area. This was the operation of electric locomotives by the Boston & Maine Railroad through the 4.73-mile long Hoosac Tunnel, on the main line of its Fitchburg Division.

Completed in 1876 at a cost of some $20,000,000, the Hoosac was the first important railroad tunnel in America, and for many years the longest. It was electrified in 1911, at a further expenditure of over half a million, after which steam trains were hauled through the tunnel zone between North Adams and East Portal by heavy electric "motors" that were coupled on the head-end.

In connection with its current dieselization program, the Boston & Maine recently introduced one hundred per cent diesel operation on its

Rev. Roger Newton House, Greenfield

Fitchburg Division west of Greenfield, which involved the elimination of the Hoosac Tunnel "electric zone". The change-over was effected by the late summer of 1946, bringing to an end the last electric rail operation of any kind in Western Massachusetts.

A Further List of Companies Projected for Street Railway Operation in Western Massachusetts

(Incorporation or charter dates given where known)

Barre Street Railway (1897-).
Berkshire & Canaan Street Railway (1899-).
Berkshire & Hampden Street Railway (1900-) (later reorganized as the New York & Berkshire Street Railway).

Canaan & Berkshire Street Railway (a Connecticut corporation; later sold to the Berkshire Street Railway).

Central Berkshire Street Railway (org. 1901) (this company was formed by rival interests to "block the Berkshire").

Chicopee Street Railway (org. 1887; acquired by the Springfield Street Railway in the same year).

Hartford & Worcester Street Railway (org. in 1903; control purchased in 1906 by the New Haven Railroad from the Boston & Worcester Street Railway, and the partly-built road turned over to the Worcester & Southbridge Street Railway, a New Haven subsidiary.

Later (1910) merged into the Worcester Consolidated system, the two miles of the Hartford & Worcester's completed road had become a part of the through Worcester-Springfield trolley line.

Parts of the Hartford & Worcester's graded but uncompleted line can still be followed along its first projected route toward Hartford, in southeastern Hampden County.

Huntington & Shelburne Falls Electric Railway (petitioned for charter in 1902).

Huntington & Westfield River Railway (1903—no charter).

Lee & Winsted Street Railway (1903-).

Lenox Street Railway (1900; acquired by the Berkshire Street Railway).

Millers Falls Street Railway.

New York & Berkshire Street Railway (a reorganization of the Berkshire & Hampden Street Railway in 1901; parts of its graded right of way can be seen today, notably in Mt. Washington township, in Berkshire County).

Northampton, Easthampton, Holyoke & Westfield Street Railway (1899—no charter; this was familiarly known as the "Four Towns Street Railway" during its organization days).

Orange & Erving Street Railway (1897—charter lapsed in 1902).

Peoples' Electric Railway (Holyoke) (organized 1894; charter lapsed 1895).

Shelburne Falls & Ashfield Street Railway (1903-).

Southern Berkshire Street Railway (1900—charter lapsed).

Springfield Horse Railroad (1863-).

Springfield Suburban Street Railway (financed by Palmer capital which was interested in the Palmer & Monson Street Railway, this company applied for locations in 1903, in competition with the Springfield Street Railway. Its locations were denied, and it received no charter).

Ware Street Railway (1900—charter lapsed).

Western Hampshire Street Railway (1895—charter lapsed).

Westfield Street Railway (1887-).

West Springfield Street Railway (acquired by the Springfield Street Railway in 1887).

Worcester, Springfield & Berkshire Street Railway (organized in 1912, this was without doubt the most ambitiously conceived street

railway consolidation ever to be proposed for this area, for it would have combined the extensive Worcester, Springfield and Berkshire trolley properties, with six hundred fifty-odd miles of track in all, into a single corporate entity, under New Haven Railroad control. This company was involved in the consideration of the so-called Western Trolley Bill (Statutes of 1912), under which such properties as might be approved by the Massachusetts Public Service Commission could be acquired by eminent domain, for the purpose of building new trolley lines. However, plans for the merger of the above mentioned companies were defeated by the Massachusetts legislature, which did not approve of the sizeable increase in the New Haven's capitalization which it would have entailed.)

Miscellaneous

Berkshire Northern Street Railway (projected in 1903 to connect Troy, N. Y., with Williamstown, Mass., via North Pownal, Vt.).

Springfield & South-western Street Railway (a Connecticut corporation, organized in 1897, it unsuccessfully applied for Massachusetts franchises in Agawam and West Springfield. It later went bankrupt in the course of construction operations in Connecticut, and its franchises were acquired by the Windsor Locks Traction Company, later succeeded by the Hartford & Springfield Street Railway (which see).

Troy, Rensselaer & Pittsfield Street Railway (a New York state corporation, this was a project to build a connecting link between the Pittsfield Electric Street Railway's line at West Pittsfield, Massachusetts, and the trolley lines in the Albany-Troy area in New York. About one and one-third miles of the abandoned grade of this projected line can still be seen today from the Pittsfield-Albany highway, on the west slope of Lebanon Mountain, in New York state).

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P. H. Kitfield, engineer, Massachusetts Department of Public Works.

Frederick C. Wright, retired deputy chief of the Springfield Fire Department.

M. J. Maxwell, former general agent of the trolley express at Springfield.

CHAPTER XLIII

Industry

PRIMITIVE INDUSTRY

STRANGERS passing through Western Massachusetts are almost invariably intrigued by the charm of the homes, the churches and the taverns of an older generation and inquire as to the source of the wealth that created them. Actually, they were made possible by the gathering and processing of natural resources close at hand.

All New England is blessed with an abundance of brooks and rivers sufficient to provide ample power for manufacturing enterprises yet small enough to be harnessed economically. At the first establishment of the towns, such streams were utilized for operating grist-mills. The next generation installed saw-mills, with "up-and-down" saws. In time, fulling-mills and woolen-mills followed. It was officially reported that in 1837, 136,962 sheep were on Berkshire County farms.

As a result of the thrift with which these small local plants were operated, their owners became men of comparative opulence. During the period in question, sheep raising paid highly satisfactory dividends, and their raising became general, as the fleece could be grown and processed entirely on the owners' premises. This easy state of affairs continued until the depredations of bands of half-wild mongrel dogs ruined the business.

In 1846 it was officially reported that "Berkshire county possesses, in rich and inexhaustible abundance, three of the most important articles of the commerce of the world; iron, marble and lime and its wood and water power are fully sufficient to enable it to fit them for the purposes of life." Those were brave words, yet inexperienced industrialists made them true to an amazing degree.

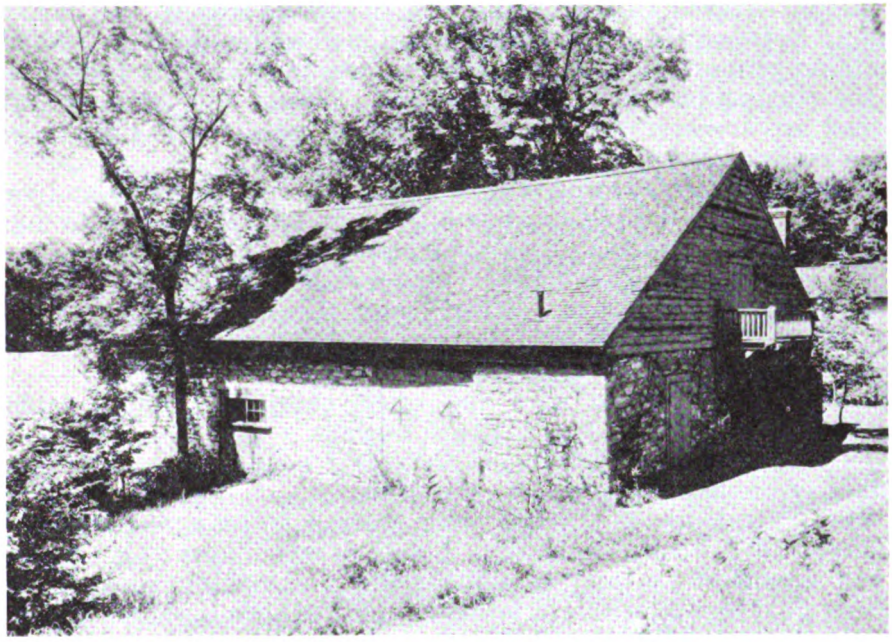
Statistics as of April 1, 1845, prepared from official reports made to the Secretary of the Commonwealth, provide a comparative picture of the industries of the ninety-seven towns, then in being in the four western counties.

BERKSHIRE COUNTY

ADAMS—In this town were 14 cotton and 3 woolen-mills; 2 calico manufactories, 2 furnaces, and manufacture of ploughs, saddles, harnesses, trunks, railroad cars, soap, candles, chairs, tin and cabinet-

wares, leather, boots, shoes, bricks, marble, lime, &c. Value of printing cloth, &c., $270,274. Value of cassimeres, stainets, and Kentucky jeans, $299,500; and of calico printing (in part), $50,612. Value of fruit, $1,248. Hay, 4,284 tons.

ALFORD—Large quantities of lumber and pine wood are prepared for market in Alford, and some boots and shoes manufactured. Hay, 1,157 tons.



Marble Mill, West Stockbridge

BECKET—Some manufactures of leather and other articles. Value of butter and cheese, $5,856. There is an abundance of hardwood in the town, and "Becket charcoal," transported one hundred and thirty-five miles by the western railroad, which passes its northern border, has become a favorite article with some of the economists in Boston, for the ignition of anthracite coal, and other purposes.

CHESHIRE—There were in this town a cotton-mill, with 936 spindles, and some manufactures of leather. 343,000 pounds of cheese were made here in 1844, and 14,100 pounds of butter; value of both $16,845. The township is admirably fitted for grazing, to which the attention of the inhabitants is principally turned, though considerable quantities of grain are raised. Extensive and valuable dairies are kept, and the Cheshire cheese has acquired a wide and merited celebrity. The famous mammoth cheese, presented to President Jefferson, January 1, 1802, contributed much to bring this town into notice. On a given day, the dairywomen sent their curds to one place. The quantity was too great to be pressed even in a cider-mill; so that in addi-

tion to the intended present, three additional cheeses were made, weighing seventy pounds each. The mammoth cheese weighed about one thousand four hundred and fifty pounds. Mr. Jefferson sent back a piece of this to the inhabitants to satisfy them of its excellence; and he also sent pieces of it, it is said, to the governors of the several states.

CLARKSBURG—The soil of this town is hard and stony. About two-thirds of it lies on the Hoosac and Bald mountains, which is cold and rocky, but covered with valuable oak, chestnut, spruce, and hemlock timber. Between the mountains, the soil is good for grazing, affording a suitable proportion of arable land to accommodate the inhabitants, for the production of dairies and wool. Wheat, rye, oats, potatoes, and flax are successfully cultivated in every part of the town, except on the rocky clefts of the mountains.

Clarksburg sends to market some produce of the dairy and some wool, but its principal commodity is lumber, of which much is manufactured, and sent to the neighboring towns.

DALTON—Two woolen-mills, 3 paper-mills, and manufactures of chairs, cabinet and tinware, leather, boots, shoes, bricks, lime, lumber, &c. Value of broadcloth and satinet manufactured, $100,000; value of paper, $85,000. Hay, 1,359 tons.

EGREMONT—Railroad cars and other carriages, chairs, cabinet-ware, boots, shoes, &c. Fruit, 10,675 bushels.

FLORIDA—The inhabitants of the town acquire a support from summer crops and the product of dairies.

GREAT BARRINGTON—In this town were 4 cotton-mills, with 6,884 spindles, and 2 woolen-mills, with 6 sets of machinery; also a forge, an axe manufactory, and establishments for making chronometers, watches, gold and silverware, jewelry, saddles, harnesses, trunks, hats, caps, cordage, railroad cars and other carriages, chairs, cabinet, and tinwares, leather, boots, shoes, bricks, lime, lumber, marble, last and bootrees, a flouring-mill, and a gin distillery. Value of shirtings, printing cloths, cassimeres, and satinet manufactured, $175,000. Hay, 5,595 tons.

HANCOCK—Two woolen-mills, with 2 sets of machinery; a furnace, and manufactures of hollow ware and castings, cordage, leather, boots, shoes, woodenware, and brooms. Value of satinet made, $13,200. Hay, 1,015 tons.

HINSDALE—One woolen-mill, with 2 sets of machinery, and manufactures of shovels, spades, hoes, forks, hats, caps, chairs, cabinet-ware, leather, boots, shoes, palm-leaf hats, lime, lumber, &c. Value of leather, $15,000. Fruit raised, 4,578 bushels. Hay cut, 3,625 tons. Value of butter and cheese, $3,205.

LANESBOROUGH—Value of marble and lime prepared for market, $11,150. Value of wool, $13,036. Maple sugar, 17,745 pounds. Fruit, 5,779 bushels. Hay, 3,651 tons.

LEE—There were 11 paper-mills in Lee, 2 of which manufacture wrapping paper. One cotton-mill with 1,000 spindles, 1 woolen-mill with 2 sets of machinery; also a powder-mill, and manufactures of

bar iron, anchors, and other articles of wrought iron; hollow-ware and castings, cotton, woolen, and other machinery, axes, shovels, spades, forks, hoes, saddles, harnesses, trunks, railroad cars, and other carriages, chairs, cabinet and tin-wares, leather, boots, shoes, bricks, lime, lumber, &c., &c. Fruits, 4,810 bushels.

LENOX—The value of pig iron manufactured was $45,000. Here were manufactures of boots, shoes, leather, saddles, harnesses, trunks, tinware, bricks, marble, lime, lumber, &c. The value of mineral and iron ore mined, was $4,594. Fruit, 11,127 bushels. Hay, 1,675 tons.

MOUNT WASHINGTON—Manufactures of iron castings, shovels, spades, forks, hoes, and lumber. The value of hay, grain, fruit, and vegetables raised in this town was $9,609. Fruit, 1,517 bushels; honey, 1,100 pounds. Hay cut, 706 tons.

NEW ASHFORD—The people of this town pay considerable attention to rearing sheep; and much beautifully variegated marble is found here, manufactured and sent to market.

NEW MARLBOROUGH—There were 3 paper-mills in this town, a powder-mill, and manufactures of hollow-ware and castings, axes, ploughs, saddles, harnesses, trunks, hats, caps, leather, boots, shoes, palm-leaf hats, bricks, lime, lumber, &c. The value of paper manufactured was $28,160. Maple sugar made, 19,070 pounds. Fruit, 11,168 bushels. Hay cut, 5,433 tons.

OTIS—There were 2 forges in this town, and manufactures of bar iron, anchors, and other articles of wrought iron, to the value of $16,500; also manufactures of axes, hoes, clocks, chairs, cabinet-ware, flour, leather, boots, shoes, cheese boxes, maple sugar, &c. Fruit, 4,754 bushels. Hay cut, 2,295 tons.

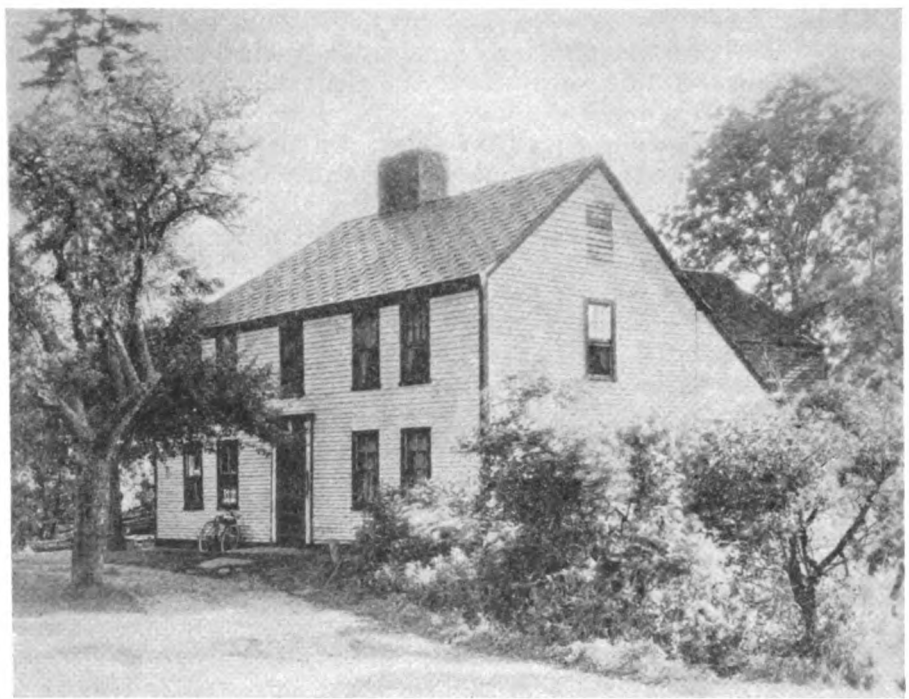
PERU—This is a fine township for wool-growing. In 1837 it produced 6,127 fleeces, which weighed 18,381 pounds, and sold for $11,948. Value of wool grown, $20,662; bushels of grain raised, 4,009; hay cut, 2,460 tons.

PITTSFIELD—There were in this town 6 woolen-mills, with 15 sets of machinery; 2 cotton-mills, with 2,056 spindles; 4 furnaces for hollow-ware and other castings. Manufactures of cotton, woolen, and other machinery; musical instruments, hats, caps, saddles, harnesses, trunks, railroad cars, and other carriages; soap, candles, chairs, tin and cabinet-wares, combs, leather, boots, shoes, blocks, pumps, mechanics' tools, bricks, building stone, marble, lime, wooden-ware, corn and other brooms, &c. There were also 2 establishments for the manufacture of muskets, rifles, fowling pieces, &c. The value of sheetings and other cotton goods manufactured amounted to $40,188; of woolen goods, $251,113; of iron-ware, $24,075; of machinery, $27,650; of carriages, $16,050; of firearms, $23,100. Maple sugar, 14,400 pounds; fruit, 3,614 bushels. Hay cut, 6,700 tons; value, $46,900.

RICHMOND—The value of pig iron manufactured in this town was $22,981. There were also manufactures of leather, boots, shoes, hoes, forks, brooms, lime, &c. The value of iron ore mined was $6,875. Value of butter and cheese, $3,011. Hay, 2,269 tons.

Sandisfield—Here was one woolen-mill; value of broadcloth and satinet manufactured, $14,000. There were also manufactures of flour, railroad cars, and other carriages, chairs, and cabinet-ware, leather, boots, shoes, bricks, building stone, lumber, &c. Value of wooden-ware, $16,699. Value of butter and cheese, $18,352; value of maple sugar, $10,232; fruit, 24,156 bushels. Hay, 4,181 tons.

Savoy—The value of leather tanned in this town amounted to $18,000. The value of lumber and fire wood prepared was $4,200.



Stratton House, Northfield

There were 1,844 bushels of fruit raised; 24,710 pounds of butter; 70,540 pounds of cheese, and 5,870 pounds of maple sugar made, and 2,700 tons of hay cut.

Sheffield—The value of flour manufactured was $7,000. There were 7,184 tons of hay grown. There were also manufactures of chronometers, watches, gold and silverware, jewelry, ploughs, saddles, harnesses, trunks, hats, caps, cars, and other carriages, chairs, cabinet-ware, leather, boots, shoes, lime, whisky, &c. Value of marble quarried, $25,600. Fruit, 33,023 bushels.

Stockbridge—There were in this town a cotton-mill with 3,550 spindles, a woolen-mill with 6 sets of machinery; 2 furnaces, and manufactures of pig iron, hollow-ware, castings, trunks, saddles, harnesses, wagons, sleighs, chairs, cabinet-ware, leather, boots, shoes, bricks, lime, lumber, &c. Value of cotton cloth, $40,250; of satinet,

$143,000; of pig iron, $53,480; of chairs and cabinet-ware, $10,500. Fruit, 11,228 bushels. Teazles, 735,000; value, $735. Hay, 3,400 tons. There were raised in this town, 14,780 bushels of oats; 11,842 bushels of other grain, and 11,000 bushels of vegetables.

TYRINGHAM—Here were 2 cotton-mills (just commenced), a woolen-mill, 3 paper-mills, and manufactures of shovels, spades, forks, hoes, chairs, cabinet-ware, combs, leather, boots, shoes, straw hats and bonnets, wooden-ware, corn and other brooms, lumber; 100,000 bushels of charcoal, garden seeds, maple sugar, &c. Hay, 3,000 tons.

WASHINGTON—The value of lumber prepared here was $11,652; of fire wood (7,448 cords), $14,896; of charcoal, $6,250. Hay, 2,332 tons.

WEST STOCKBRIDGE—There were in this place a rolling-mill, a forge, a flouring-mill, and manufactures of nails and nail machines, bar iron, musical instruments, harnesses, saddles, trunks, cars, and other carriages, chairs, tin and cabinet-wares, lime, lumber, &c. The value of iron ore mined was $10,200; the value of marble quarried and prepared, $29,224. Fruit, 4,842 bushels. Hay cut, 2,031 tons.

WILLIAMSTOWN—The 2 cotton-mills in this town, with 2,300 spindles, produced printing cloth, cotton yarn, and batting, to the amount of $35,911. The woolen-mill made $10,400 worth of satinet. There were also manufactures in the town of cars and other carriages, saddles, harnesses, trunks, chairs, tin, and cabinet-wares; leather, boots, shoes, bricks, brooms, lumber, and among other agricultural products, 4,416 tons of hay, 36,515 pounds of butter, and 132,095 pounds of cheese.

WINDSOR — Manufactures of chairs, cabinet-ware, boots, shoes, palm-leaf hats, lime, lumber, &c. Value of fruit, $1,380; of butter and cheese, $7,779. Hay cut, 3,541 tons.

FRANKLIN COUNTY

ASHFIELD—There were 3 tanneries in this town, and manufactures of palm-leaf hats, essences, patent medicines, linen bosoms and collars. There were 21,402 pounds of merino wool produced, and 59,981 pounds of maple sugar made. Value of hemlock bark prepared, $4,500. Hay cut, 3,799 tons.

BERNARDSTON—Here were some manufactures of boots, shoes, straw bonnets, scythes, snaiths, lumber, charcoal, &c., and 5,000 pounds of maple sugar was produced. Value of product of farms, $23,575.

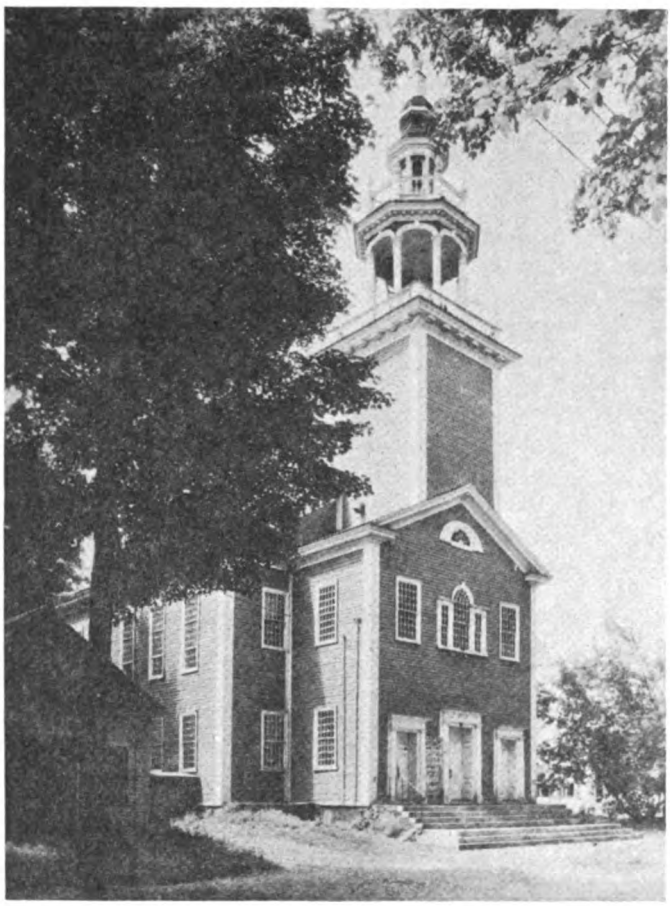
BUCKLAND—Some carriages were made here, and some wooden-ware. Value of fruit, $558. Hay cut, 990 tons.

CHARLEMONT—The manufactures of this town consisted of hollow-ware, iron castings, shovels, spades, forks, hoes, saddles, harnesses, trunks, carriages, leather, boots, shoes, palm-leaf hats, scythes, snaiths, raw silk, &c. Hay cut, 2,386 tons.

COLERAINE—This place had 3 cotton-mills, with 6,900 spindles; the value of cotton cloth manufactured was $84,000. Also 2 furnaces for the manufacture of hollow-ware and castings, saddlery, trunks, chairs,

cabinet-ware, leather, boots, shoes, palm-leaf hats, bricks, mechanics' tools, wooden-ware, lumber, doors, blinds, &c. Fruit raised, 15,000 bushels; maple sugar produced, 34,760 pounds. Hay cut, 4,154 tons.

CONWAY—There were 2 cotton-mills in this town, with 2,416 spindles; one woolen-mill, with 2 sets of machinery, and 2 flouring-



Town Hall, Ashfield

mills. The value of printing cloth, sheetings, cotton yarn, and batting, was $27,431; value of woolen goods, $56,000; value of flour manufactured, $9,333. There were also manufactures of ploughs, saddlery, trunks, hats, caps, carriages, chairs, cabinet-ware, combs, leather, boots, shoes, palm-leaf hats, bricks, wooden-ware, &c. 40,000 pounds of maple sugar was made. Fruit grown, 3,219 bushels. Hay cut, 3,398 tons.

DEERFIELD—The amount of cutlery manufactured in this town was $60,000. There were also manufactures of ploughs, coaches, and other carriages, lead, leather, boots, shoes, straw braid, palm-leaf

hats, wooden-ware, corn brooms, tobacco, raw silk, teazels, and 5,800 pounds of maple sugar. Fruit, 12,093 bushels. Hay, 4,195 tons.

ERVING—One woolen-mill, one tannery, and manufactures of palm-leaf hats, and various kinds of lumber prepared for use. Hay cut, 259 tons.

GILL—The manufactures of Gill consisted of leather, boots, shoes, carriages, hats, caps, corn and other brooms; 400 pounds of tobacco were raised, and 5,954 bushels of fruit produced.

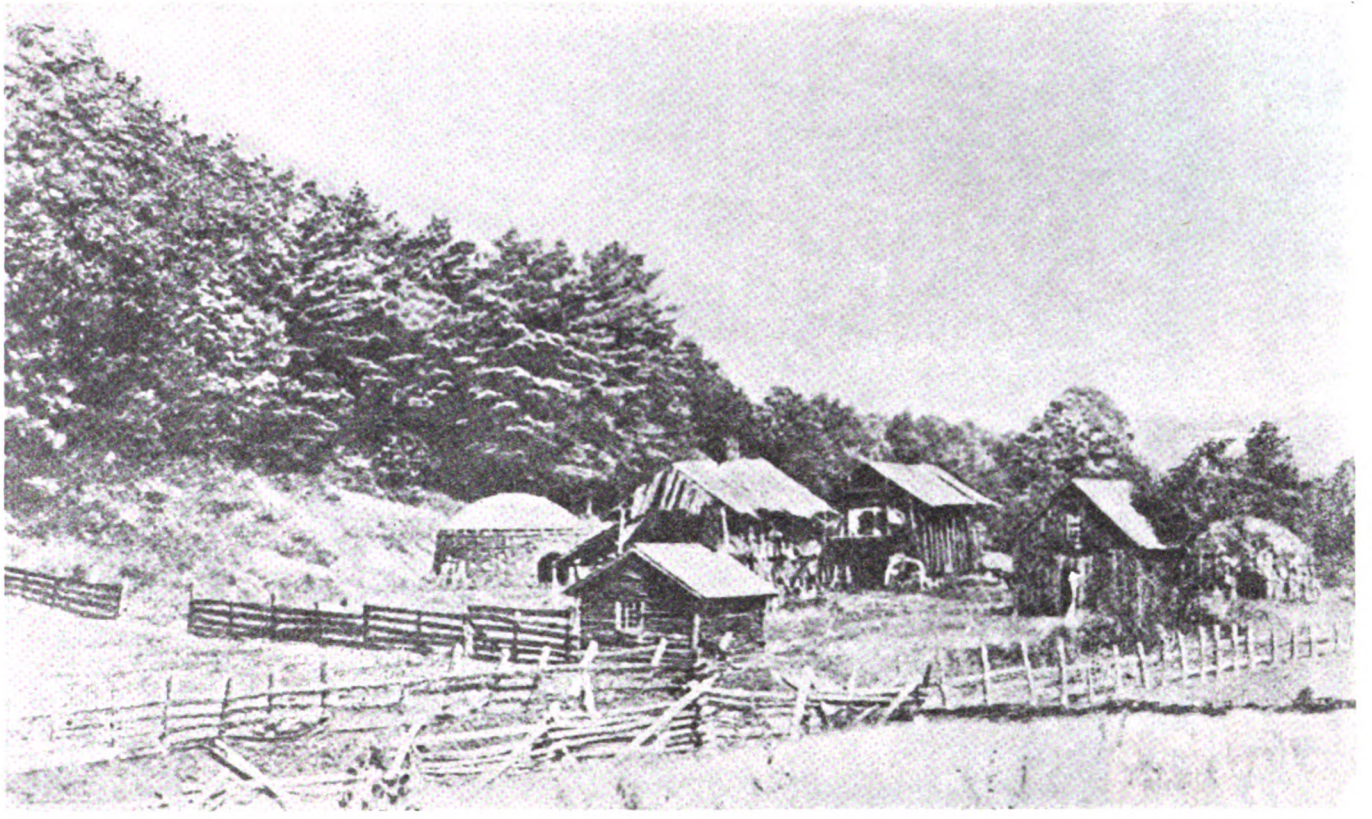
McHard House, Greenfield

GREENFIELD—In this town was one woolen-mill, with 5 sets of machinery, manufacturing cassimeres to the amount of $130,000. Also, manufactures of hollow-ware and iron castings, saddlery and trunks, chairs, cabinet-ware, cars and other carriages, tinware, leather, boots, shoes, bricks, mechanics' tools, &c. Fruit, 4,000 bushels; tobacco, 1,500 pounds. Hay, 2,681 tons.

HAWLEY—Manufactures of leather, boots, shoes, and palm-leaf hats. Fruit raised, 10,539 bushels; maple sugar, 30,253 pounds. Hay cut, 1,381 tons.

HEATH—Manufactures of chairs, leather, palm-leaf hats. Fruit, 8,893 bushels; maple sugar, 16,080 pounds. Hay, 1,984 tons.

LEVERETT—One woolen-mill, and manufactures of leather, boots, shoes, scythes and scythe snaiths, hoes, carriages, palm-leaf hats,



Charcoal Kilns, Pelham

blocks and pumps, wooden-ware, brooms, &c. Value of charcoal, $1,200; of lumber, $5,890.

LEYDEN—Value of agricultural productions, $21,217.

MONROE—Value of agricultural productions, $9,464.

MONTAGUE—In this place were manufactures of musical instruments, saddlery, trunks, hats, caps, carriages, leather, boots, shoes, palm-leaf hats, bricks, mechanics' tools, wooden-ware, corn and other brooms, confectionary, matches, &c. Tobacco raised, 1,000 pounds. Hay, 1,440 tons.

NEW SALEM—Manufactures of leather, boots, shoes, saddles, harnesses, trunks, straw braid, bricks, lumber, &c. Fruit raised, 7,125 bushels. Hay, 1,131 tons.

NORTHFIELD—Here were manufactures of carriages, chairs, tin and cabinet-wares, ploughs, saddles, harnesses, trunks, leather, boots, shoes, straw bonnets and hats, bricks, corn and other brooms, doors, sashes, blinds, &c. Value of broom brush raised, $4,325. Fruit raised, 4,000 bushels. Hay cut, 2,355 tons.

ORANGE—Manufactures of iron castings and hollow-ware, cotton, woolen, and other machinery, agricultural tools, saddles, harnesses, trunks, carriages, leather, boots, shoes, straw braid, palm-leaf hats, wooden-ware, and 19,000 pounds of maple sugar. Fruit raised, 60,275 bushels. Hay cut, 2,380 tons.

ROWE—One woolen-mill; value of satinet manufactured, $23,375; also manufactures of leather, boots, shoes, chairs, cabinet-ware, palm-leaf hats, wooden-ware, and 23,000 pounds of maple sugar. Hay cut, 2,100 tons.

SHELBURNE—This place had 2 woolen-mills, which manufactured $11,000 worth of satinet. Also, manufactures of scythes, axes, farming tools, gimlets, carriages, chairs, cabinet-ware, leather, boots, shoes, palm-leaf hats, wooden-ware, &c. The value of scythe snaiths manufactured amounted to $60,000; quantity of maple sugar, 27,260 pounds; of fruit, 11,895 bushels. Hay, 2,803 tons.

SHUTESBURY—Cars and other vehicles, chairs, cabinet-ware, boots, shoes, straw braid, palm-leaf hats, corn and other brooms, large quantities of lumber, washing machines, felloes, &c. Hay, 881 tons.

SUNDERLAND—Boots, shoes, chairs, cabinet-ware, palm-leaf hats, bricks, blacking, &c. Value of corn and other brooms, $12,000; value of butter and cheese, $4,145; maple sugar, 14,500 pounds. Value of lumber and railroad ties, $3,730. The value of hay, grain, and other products of farms, $23,518.

WARWICK—Three tanneries; manufactures of boots, shoes, glue, gums, axes, and other edge tools, palm-leaf hats, lumber, maple sugar, &c. Hay, 1,086 tons.

WENDELL—Manufactures of railroad cars and other vehicles, chairs, cabinet-ware, boots, shoes, straw braid, palm-leaf hats, wooden-ware, &c. The quantity of lumber prepared was 1,258,000 feet, valued at $9,000. Hay, 1,154 tons.

WHATELY—There were 3 woolen-mills in this town; value of satinets, flannel, and Kentucky jeans manufactured, $23,300. Also

manufactures of cutlery, carriages, leather, boots, shoes, palm-leaf hats, bricks, corn and other brooms, boots, stone and brown ware, teazels, pocket books and wallets, &c. The value of broom brush raised was $4,008—66,800 pounds. Hay, 2,095 tons.

Hampden County

Blandford—There was in this town one woolen-mill, with 2 sets of machinery, making 12,000 yards of broadcloth, valued at $18,000. One paper-mill, for wrapping paper, and three tanneries, making $12,000 value of leather. Quantity of butter made, 53,155 pounds; of cheese made, 192,025 pounds. Value of both, $12,997. Hay 4,085 tons.

Brimfield—One cotton-mill, with 1,338 spindles, and manufactures of cutlery, leather, boots, shoes, saddlery, trunks, coaches, and other carriages, palm-leaf hats, copper pumps, cider brandy, bricks, lumber, &c. The value of cotton sheetings manufactured, was $15,000; of boots and shoes, $22,892; hay, $22,666.

Chester—One cotton-mill, with 1,500 spindles; value of cotton cloth, $13,500. Manufactures of cabinet-ware, chairs, leather, boots, shoes, mechanics' tools, wooden-ware, shoe pegs, &c. Hay, 2,745 tons.

Granville—Here were manufactures of chronometers, watches, gold and silver-ware, jewelry, ploughs, powder kegs, maple sugar, and large quantities of butter and cheese. Hay, 2,895 tons.

Holland—Manufactures of carriages, palm-leaf hats, bricks, lumber, &c. Hay, 561 tons.

Longmeadow—The value of watches, chronometers, silver-ware and jewelry made in this town, was $15,000. There were also manufactures of cars and other carriages, leather, boots, shoes, corn and other brooms, bricks, building stone. Value of fruit raised, $1,084; of tobacco, $1,941. Hay, 2,372 tons.

Ludlow—One cotton-mill, with 8,052 spindles; one woolen-mill; value of cotton cloth, batting, and satinet manufactured, $113,312. Also manufactures of saddlery, boots, shoes, ploughs, palm-leaf hats, brooms, reeds, &c.

Monson—There were 2 cotton-mills in this town, with 3,644 spindles, manufacturing $48,700 worth of brown sheeting; also 3 woolen-mills, with 6 sets of machinery, making $130,000 worth of satinet. There were also manufactures of cotton, woolen, and other machinery, axes, ploughs, jewelry, chronometers, watches, gold and silver-ware, saddlery, chairs, tin and cabinet-ware, leather, boots, shoes, palm-leaf hats, lumber, building stone, &c. Value of fruit raised, $2,248. Hay, 3,475 tons.

Montgomery—The town is well watered by Westfield River and Moose Meadow Brook, and produces rich pastures for sheep and cattle.

Palmer—In this town were 2 cotton and one woolen-mill, making the value of satinet, printing and bleaching goods, $243,538. Here were also manufactures of hollow-ware and iron castings, cotton, woolen,

and other machinery, scythes, saddlery, cars, and other carriages, soap, candles, chairs, tin and cabinet-wares, boots, shoes, palm-leaf hats, bricks, lumber, reeds, &c. Hay, 2,152 tons.

RUSSELL—Manufactures of cotton-twine and large quantities of lumber. Hay, 875 tons.

SOUTHWICK—The value of gunpowder made in this place, was $6,250. The value of fruit raised, was $2,675, of tobacco, $627. Here were also manufactures of leather, boots, shoes, snuff, tobacco, cigars, whips, lumber, &c. Hay, 1,748 tons.

SPRINGFIELD—Springfield abounds in excellent water-power; that of the Chicopee alone, within the limits of the town, it has been ascertained, is fully equal to that of the Merrimack at Lowell; not half of which is yet occupied. And in manufacturing importance, Springfield is second only to Lowell in New England.

On Mill River are extensive paper, cotton, and iron casting manufactures, mills, and mechanical establishments. Also machine shops connected with the United States Armory.

Cabotville, three miles north from the railroad depot, on the Chicopee River, is a large manufacturing village. Three cotton manufacturing companies are established here; the Cabot, Perkins, and Dwight, with a capital of one million seven hundred thousand dollars in all, and 7 mills, running 53,000 spindles, with an annual consumption of 12,000 bales of cotton, and a manufacture of 16,000,000 yards of cloth, giving employment to 1,500 operatives. Also the Ames Company are largely engaged in the manufacture of swords, brass cannon, bells, machinery, and cutlery. This is the only place in the country where any considerable business is carried on in the manufacture of swords. The whole process, from the forging of the blade to the most exquisite finish, being done within the establishment.

Chicopee Falls, a mile and a half farther up the Chicopee, is another considerable manufacturing village. The Chicopee Company is established here, with a capital of $700,000, having 4 mills, running 22,544 spindles, with an annual consumption of 5,000 bales of cotton, and a manufacture of 6,500,000 yards of cloth, giving employment to 800 operatives. There are also in the place extensive manufactures of paper, iron castings, carbines and pistols, machinery, &c.

TOLLAND—Manufactures of clocks, leather, boots, shoes, shovels, spades, forks, hoes, lumber, &c. Hay, 2,259 tons.

WALES—One woolen-mill, with 2 sets of machinery; value of satinet made, $56,000. Manufactures of leather, boots, shoes, straw braid, bricks, lumber, &c. Hay, 1,000 tons.

WESTFIELD—In this town were 2 powder-mills, one paper-mill, and manufactures of ploughs, saddlery, hats, caps, wagons and other carriages, tin and cabinet-wares, chairs, leather, boots, shoes, bricks, cigars, snuff, tobacco, mechanics' tools, and the value of $100,000 of whips, employing 100 males and 200 females. Value of paper, $25,000; value of powder, $9,750. Fruit, 6,000 bushels. Hay, 2,784 tons.

West Springfield—There was one paper-mill in this town, which manufactured $60,000 value of paper; one cotton-mill; value of printing cloth made, $48,500. Here were also manufactures of wagons, sleighs, leather, boots, shoes, cigars, snuff, tobacco, whips, bricks, brooms, lumber, &c. The value of building stone quarried and prepared, amounted to $60,000. Fire wood sold, 2,720 cords, value of

Old Red House, Gill

$10,880. Fruit raised, 10,714 bushels; tobacco, 30,150 pounds; teazels, 600,000 value, $700. Hay, 5,003 tons, value, $50,030.

Wilbraham—Manufactures of leather, boots, shoes, ploughs, palm-leaf hats, building stone, corn and other brooms; fruit, 51,832 bushels; tobacco, 29,100 pounds. Hay, 2,557 tons. Value of butter and cheese made, $4,982.

Hampshire County

Amherst—In this town were one cotton, 2 woolen, and 2 paper-mills; value of woolen goods, $52,600. There were also manufactures of saddlery, cards, cars and other carriages, chairs, cabinet-ware, leather, boots, shoes, straw bonnets and hats, mechanics' tools, bricks, corn brooms, laces and edgings, band and hat boxes, type cases, children's wagons, washing machines, steel springs, &c. Tobacco raised, 29,638 pounds. Fruit, 4,805 bushels. Hay, 3,900 tons.

BELCHERTOWN—Manufactures of cotton-wicking, shovels, spades, forks, hoes, ploughs, brass-ware, organs, saddlery, hats, caps, wagons and other vehicles, chairs, cabinet-ware, boots, shoes, palm-leaf hats, bricks, tobacco, snuff, cigars, lumber, &c. Value of carriages, $40,000; value of palm-leaf hats, $15,356. Fruit, 8,972 bushels; hay, 4,421 tons.

CHESTERFIELD—Here were manufactures of leather, hollow-ware, iron, castings, palm-leaf hats, wooden-ware, lumber, &c. The value of leather tanned, was $17,400; of maple sugar made, $2,827. Hay, 2,423 tons.

CUMMINGTON—This place had 2 woolen-mills, with 2 sets of machinery, and manufactures of hollow-ware, iron castings, leather, boots, shoes, palm-leaf hats, &c. Value of leather tanned and curried, $115,800. Maple sugar made, 29,500 pounds. Hay 2,516 tons.

EASTHAMPTON—One flouring-mill, and manufactures of cotton-wicking, leather, boots, shoes, palm-leaf hats, lumber, &c. Hay, 912 tons.

ENFIELD—In this town were 2 cotton-mills, with 1,280 spindles; 2 woolen-mills, with 3 sets of machinery, and manufactures of cotton, woolen, and other machinery, ploughs, saddlery, cards, carriages, chairs, cabinet-ware, leather, boots, shoes, palm-leaf hats, lumber, &c. Value of satinet and Kentucky jeans manufactured, $37,500; value of cotton and wool cards, $35,000. Hay, 1,172 tons. Fruit, 2,712 bushels.

GOSHEN—Large quantities of lumber and bark are here prepared for market. Broom handles made, 350,000; maple sugar manufactured 15,693 pounds. Millet, 1,246 tons; value, $7,476.

GRANBY—Two woolen-mills, with two sets of machinery, one paper-mill, and manufactures of palm-leaf hats. Value of satinet and flannel made, $31,250; of paper, $7,200. Hay, 2,596 tons. Fruit, 3,129 bushels.

GREENWICH—One woolen-mill, and manufactures of scythes, shovels, spades, forks, hoes, brushes, wagons, boots, shoes, palm-leaf hats, pails, lead pipe, &c.

HADLEY—There were manufactured in this town 699,369 corn and other brooms, valued at $90,102. There were also manufactures of leather, boots, shoes, glue, gums, chairs, cabinet-ware, cards, children's wagons, saddlery, broom screws, cutlery, wire, pumps, bricks, palm-leaf hats, &c. The value of lumber prepared, was $24,304. Hay, 3,059 tons.

HATFIELD—The value of brooms and brushes manufactured in this town, was $40,950. There were also manufactures of palm-leaf hats, boots and shoes. The value of lumber prepared for market, was $14,000. Hay, 2,216 tons.

MIDDLEFIELD—In this town were 3 woolen-mills, with 5 sets of machinery; value of broadcloth and satinet made, was $60,200. Also manufactures of leather, wooden bowls, and lumber.

NORTHAMPTON—There were in this town one woolen-mill, with 8 sets of machinery, 2 paper-mills, 3 establishments for manufacturing

silk, and manufactures of hollow-ware, iron castings, jewelry, gold and silver-ware, saddlery, hats, caps, coaches and other carriages, soap, candles, chairs, tin and cabinet-wares, leather, boots, shoes, straw bonnets and hats, bricks, books, corn and other brooms, lumber, &c. Yards of broadcloth and cassimere manufactured, 92,214. Value of paper made, $64,250; sewing silk, manufactured, 6,100 pounds. Value, $41,500. Fruit raised, 16,002 bushels; tobacco, 18,260 pounds.

Yale Duryea Mill, Stockbridge

Hay, 3,740 tons. There were raised in this town, 27,347 bushels of corn, 750 bushels of wheat, 3,863 bushels of rye, 60 bushels of barley, and 6,952 bushels of oats; value of grain, $19,447.

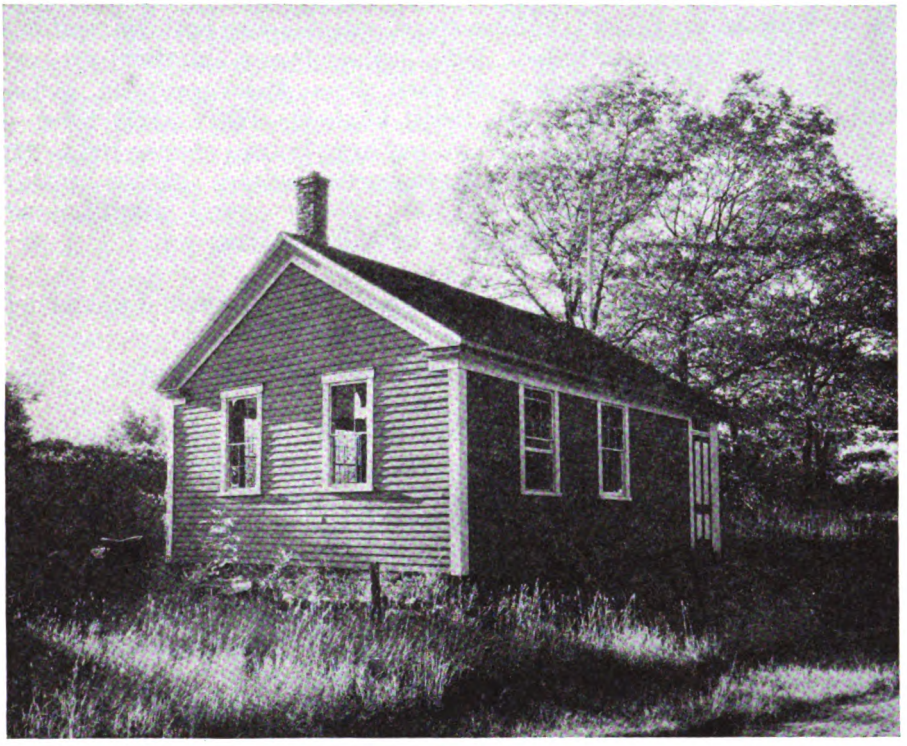
NORWICH—One flour-mill, one woolen-mill, and a tannery. Also manufactures of boots, shoes, palm-leaf hats, scythe stones, lumber, &c. Hay, 1,260 tons.

PELHAM—Manufactures of wagons, boots, shoes, palm-leaf hats, building stone, lumber, lasts, bench and hand screws, &c. Hay, 991 tons.

PLAINFIELD—Here were 2 woolen-mills, which manufactured cassimere, satinet, Kentucky jeans, and flannel, to the amount of $2,872. Also manufactures of cabinet-ware, harnesses, leather, boots, shoes, palm-leaf hats, bricks, wooden-ware, farming utensils, &c. Maple sugar made, 25,664 pounds. Hay, 1,625 tons.

PRESCOTT—Manufactures of boots, shoes, palm-leaf hats, bricks, lumber, &c. Hay, 1,281 tons.

SOUTH HADLEY—There were 2 woolen-mills in this town, with 3 sets of machinery; 3 paper-mills, and 3 tanneries; value of cassimere and satinet manufactured, $28,000; of paper, $150,000 and of leather tanned and curried, $10,710. Also manufactures of pearl buttons,



Old Red Schoolhouse, Prescott

saddlery, coaches, and other carriages, boots, shoes, bricks, corn and other brooms, &c. Fruit raised, 3,428 bushels; tobacco, 6,000 pounds. Hay, 1,792 tons.

SOUTHAMPTON—Manufactures of satinet, ploughs, saddlery, tin-ware, bricks, lumber, railroad sleepers, baskets, leather; value of bricks made, $15,000. Hay, 1,725 tons.

WARE—Here were 3 cotton-mills, with a capital of $150,000; one woolen-mill, with 7 sets of machinery; and manufactures of saddlery, trunks, hats, soap, chairs, tin and cabinet-wares, boots, shoes, palm-leaf hats, bricks, augers, &c. There were 26,000 Florence and fancy bonnets manufactured, valued at $80,000. Value of cassimere and flannel manufactured, $175,000. Fruit raised, 8,268 bushels. Value of milk sold, $800. Hay, 2,522 tons.

WESTHAMPTON—Manufactures of brass and silver, leather hoes, bark, lumber, charcoal, axe-helves, bobbins, &c. Maple sugar, 5,744 pounds. Fruit, 11,677 bushels. Hay, 1,166 tons.

WILLIAMSBURG—There were 4 woolen-mills in this town, with 5 sets of machinery; value of broadcloth, cassimere, satinet, and flannel, $21,200. The value of covered buttons manufactured at this place, was $175,000; of wood button-moulds, $600; of horn buttons, $30,000; of japaned buttons, $15,000. There were also manufactures in the town of iron castings and hollow-ware, axes, hoes, cutlery, saddlery, leather, boots, shoes, palm-leaf hats, lather boxes, lumber, &c. Also a flour-mill, and a manufactory of steel pens; value of pens, $15,000. Teazels raised, 1,418,000. Fruit, 2,650 bushels. Hay, 2,000 tons.

WORTHINGTON—Manufacture of leather, boots, shoes, hats, caps, painted curtain blinds, children's wagons, carpenters' planes, woodenware, &c. Value of leather, $37,500; maple sugar manufactured, 37,280 pounds. Fruit, 3,000 bushels; hay, 3,363 tons.

Ten years later, a similar but more detailed report described the industries of Springfield as of 1855 in these words:

"The manufactures of Springfield, other than those of the Springfield Armory, are as follows.

The American Machine Works were organized in 1847, by a few gentlemen, all practical mechanics of a high order, with a capital of $19,000. The works, ever since their commencement, have been under the management of P. B. Tyler, as president and superintendent, and have been eminently successful. The company has now a capital of $80,000, and a surplus of over $40,000. The leading articles manufactured are stationary steam engines and boilers. Tyler's direct action steam cotton presses, steam saw mills, both circular and vertical, cordage machinery, mint and coining machinery, &c. Employment is given to 150 hands. The stock used annually is as follows:—650 tuns of coal, 100 tuns Waterford moulding sand, 950 tuns pig iron, 300 tuns bar iron, 6 tuns cast steel, 150 tuns boiler plates, 9 tuns rivets, 4 tuns copper and 3 tuns block tin. The amount of production is upwards of $225,000 annually.

Eliphalet Trask manufactures iron castings, working up annually 11,000 tuns of iron valued at $45,000. He employs 25 men, who produce 800 tuns castings, worth $60,000. This foundry has been in operation 18 years.

T. W. Wason carries on a foundry for casting car and locomotive wheels. In this manufacture he consumes 592 tuns of coal, and 1,600 tuns of iron annually, of the aggregate value of $84,262. The foundry has been in operation three years, and employs 28 hand.

The Agawam Foundry is a new concern, started by Messrs. Harris & Birnie, on the 1st of February, 1854. The foundry is established for general work, with special reference to railroad bridge and machinery castings. The rate at which stock has been consumed would amount in one year to about 1,400 tuns of pig iron, and 250

tuns of coal, valued in the aggregate at $60,000. The concern employs 25 hands, who produce castings of the value of about $100,000 annually.

Stone & Harris manufacture bridge-bolts, and machinery, consuming annually 400 tuns of bar and cast iron, and employing 30 hands. The concern has been in operation for eight years. The value of annual production is $55,000.

Amos Call manufactures dividers, compasses, callipers, punches, pocket squares, bevils and gauges, using up annually 10 tuns of iron and two tuns of steel, of the aggregate value of $4,000. He employs 23 hands, has been engaged in the business ten years, and produces an annual amount of articles valued at $10,000.

Wright & Co. are manufacturers of car-axles, connection rods, and wrought iron shafting. They have been in operation five years, and consume annually in their business 460,000 lbs. of scrap-iron, 225,000 lbs. billet iron, 896,000 lbs. Cumberland coal, 72,000 lbs. fire sand, and 6,000 fire bricks, valued in the aggregate at $18,000. Nine hands are employed, and produce annually $27,500 worth, or 476,500 lbs. of manufactured articles.

T. W. Wason and Company are the largest manufacturers in the town. The articles manufactured are passenger, baggage, freight, and hand cars. In this manufacture, Mr. Wason has been engaged for eight years. The present company was formed about a year since. The number of hands employed is 156, and these work up annually an amount of stock valued at $196,435. This stock is mostly as follows: 3,000 car wheels, 350 tuns of bar iron, 285 tuns cast iron, 196 car axles, 1,200 gross screws, 55,650 feet of trimmings, 200 cask of nails, 929,000 feet of lumber, 24,400 rubber springs, 5,000 yards of crimson plush, 10,000 lbs. curled hair, 1,250 lbs. glue, 1,700 panes of German glass, 8,800 lbs. of mixed paint, 400 gallons of varnish, 150 packs of gold leaf, 17,500 lbs. Babbit boxes, 2,000 lbs. cotton waste, 512 tuns of coal, and 1,200 gallons of oil. The amount of annual productions is 50 passenger cars, 7 baggage cars, 300 freight and 25 hand cars, the aggregate value of which is $295,000.

James Warner is engaged in the manufacture of Warner's patent rifles and pistols. The number of hands employed ranges from 25 to 50. Arms are manufactured at the rate of from 2,000 to 3,000 annually, valued at between $40,000 and $50,000.

Mills and Carpenter manufacture stationary and portable steam engines, employing 25 hands, and producing annually engines to the value of $50,000. The concern has been in operation three years.

Cheney Bigelow manufactures sieves and wire cloth, using up annually about 16 tuns of wire, 600 pounds of hair, and 2,500 dozen hoops, handles, &c. The value of the stock consumed is about $5,000, the number of hands employed, 18. The concern has been in operation twelve years, and the annual product is 40,000 feet of wire cloth, 2,500 dozen sieves of different kinds, with varying amounts of different descriptions of wire work, valued at $10,000.

Harris and Colton employ 60 men in the manufacture of doors, sash and blinds, and use up annually in this manufacture 1,300,000 feet of lumber, valued at $45,000. The concern has been in operation five years, and produces annually 30,000 doors, 10,000 window sash, and 8,000 blinds, valued in the aggregate at $75,000. A large amount of lumber for building purposes is also planed at the same establishment, and comes within the labor of the above number of hands.

Bailey, Salisbury and Company manufacture doors, sash and blinds, using up annually in the manufacture 846,520 feet of lumber, valued at $25,395. The number of hands employed varies from 30 to 35. The number of doors turned out in 1853 was 15,460, besides sash and blinds, valued in the aggregate at $60,000.

J. G. Chase and Company occupy from 20 to 25 hands in dressing lumber. The concern with its predecessors has been in operation eight years.

The India Rubber Web Manufacturing Company make shoulder-brace webbing, elastic and inelastic, cotton and silk 'elastics', and cotton and silk cords and braids of various kinds. There are employed in the concern six men and boys and twenty girls. They have been in operation about ten years.

Kibbe, Crane and Company employ forty hands in the manufacture of confectionery in all its branches. They use up annually in this manufacture 250 tuns of sugar, 30,000 lbs. of gum arabic, 6,000 lbs. almonds and pea-nuts, 40,000 wood and paper boxes, 8,000 bushels of charcoal, and 75 tuns of hard coal. The concern has been in operation, with occasional changes in the constituents of the firm, fifteen years, and produces annually 300 tuns of candy.

D. H. Ripley and Company are manufacturers of checked cassimeres and doe-skins. They consume annually 52,000 lbs. of wool, valued at $25,000. The number of hands employed ranges from 35 to 40 men, who turn out weekly 1,500 yards of fabric, valued at 75 cents per yard, and amounting, by that average, to the annual product of $58,500.

John R. Hixon manufactures boots and shoes, occupying from 40 to 50 hands in the business, and using annually from $15,000 to $20,000 worth of stock. The amount of production is from $20,000 to $25,000. The concern has been in operation one year.

R. G. Shumway and Company manufacture jewelry. Their concern has been in operation four years, employing 50 hands, consuming annually $40,000 in stock, and producing $100,000 worth of manufactured articles.

The Springfield Locomotive Works, carried on by Blanchard and Kimball, manufacture locomotives and stationary engines, and machinists' tools, using annually 664 tuns of iron, valued at $78,000. The establishment employs 140 hands, has been in operation two years, and turns out two locomotives per month. The value of the annual manufacture, in all its branches, amounts to $228,000.

David Smith has been engaged in the manufacture of carriages for twenty-seven years. He now employs twenty-five hands, who turn out $16,000 worth of carriages, of various descriptions, annually.

The Hampden Paint and Chemical Company manufacture chrome green, chrome yellow, lead-colored, free-stone and buff paints, and Glauber and Epsom salts and magnesia. One hundred tuns of the various kinds of paints are calculated as the annual product, valued in the aggregate at $20,000."

Five of the foregoing industries are still operating, in name and product more or less akin to that of a century ago:

Amos Call, now Bemis & Call Company.
Wright & Co. now Springfield Foundry Company.
Cheney Bigelow, now Cheney Bigelow Wire Works.
David Smith, now Smith Carriage Company.
Hampden Paint & Chemical Company, now Hampden Paint Division of E. & F. King Company.

The Final Accounting

Preceding in this volume is the outline account of the industrial activities of the one hundred cities and towns of Western Massachusetts as of 1845, approximately a century ago. Recently the Western Massachusetts Electric Company has compiled similar statistics as of the present day. These two exhibits, when combined, tell such a complete story of a century of progress, that with their permission, the latter schedules are here reprinted, practically in their entirety.

Today, as a hundred years ago, there is the natural advantage of water supply in Western Massachusetts, to which have been added the man-made services of electric power, gas and communications to insure both home and industry the most modern facilities at the lowest possible cost.

The large number of rivers and streams was originally of major importance in the development of cheap, abundant electric power in the region. Today's fourteen hydroelectric stations are supplemented by five steam generating stations. A network of power facilities within the area interconnects with other lines outside, which link the entire Northeast, insuring an uninterrupted flow of power at all times. Over ninety-five percent of the farms in the area are electrified.

In the principal cities and towns, gas is available for domestic and industrial use.

Telephone and telegraph service throughout Western Massachusetts are excellent. There is a high standard of fire protection in even the very small communities and a long record of low fire loss.

The wide range of products manufactured in the area is further evidence of the all-round advantages of Western Massachusetts for industrial development. The 1946 Census for the four western counties shows a total of 933 industrial establishments producing

goods valued at $898,207,565. These goods, many of them bearing the most famous names in their field, are sold in every part of the world.

Of the 464,539 Western Massachusetts men and women over fourteen years of age, about 94,000 are now in industry. Their wages total more than $220,000,000 a year. Many are highly skilled workers with long training and experience. In fact, the Connecticut Valley alone has the highest concentration of mechanical skills of any similar area in the United States. One of the outstanding characteristics of the Western Massachusetts workers is their stability. A large percentage own their own homes. They like the living conditions and they want their children to grow up in the many cultural and educational advantages which the section offers.

Western Massachusetts is well supplied with the many types of service which are essential to the efficient functioning of industry today. There are, in the four counties, some 145 banks with a total of more than $800,000,000 in deposits, a number of investment firms, over thirty accounting and auditing concerns and more than six-hundred attorneys including specialists in every type of law.

It is one of the leading publishing centers of New England. It is the focal point for printing and allied trades. Altogether, Western Massachusetts offers industry the services of approximately eighty printing establishments, six photo-engravers, dozens of commercial photographers and commercial artists. There are seven daily newspapers, twenty-two weekly papers and eight radio stations.

Of all the advantages which Western Massachusetts offers, one of the most impressive cannot be measured,—except perhaps by the enthusiasm of the people who have found here the ideal spot in which to live, work and play. Endowed with good climate and beautiful scenery it offers a combination of unsurpassed natural and man-made advantages.

In addition to the thirty state forests, there are countless woods, lakes and streams where the sportsman may hunt and fish. There are dozens of well-developed winter sports areas, golf courses, hiking and bridle trails, picnic grounds, boating facilities and swimming spots.

The standard of education in Western Massachusetts is exceptionally high. Besides an excellent public school system, the locality boasts seven major colleges and universities,—Amherst, Williams, Springfield, Smith, Mout Holyoke, American International, University of Massachusetts,—several of the country's leading private schools, and many technical and vocational schools. There are all kinds of musical groups, including two outstanding symphony orchestras, innumerable art, drama and civic organizations, excellent museums and libraries. Famous all over the country are the Berkshire Music Festival, featuring the Boston Symphony Orchestra; the Jacob's Pillow Dance Festival, and the Eastern States Exposition. Dozens of smaller fairs and festivals, dog shows, horse shows, flower and

garden shows, religious, educational and business conferences express the broad interests of the people.

For comparison with the schedule of 1845, the statistics of today here follow:

ADAMS—Population 12,724. Employed 5,575. Elevation 790 feet. Hoosac River. N.Y.C. R.R.; Private commercial landing field, 1.3 miles south southeast. Four banks, five hotels. Manufactures: Textiles, mason and agricultural lime, paper, wallpaper, artificial leather, plastics. Birthplace of Susan B. Anthony. Mount Greylock,

Mohawk Trail

highest point in Massachusetts, 3,505 feet. Famous Thunderbolt ski run.

AGAWAM—Includes North Agawam, Feeding Hills. Population 8,420. Elevation 50 feet—600 feet. Mill Pond, Silver Lake, Agawam River. N.Y.C. R.R., freight station, one mile; N.Y.C., B. & M., N.Y. N.H. & H. railroads, passenger and freight, three miles. Private commercial airport, 2.4 miles west southwest; private commercial land and seaplane port, .5 miles south. Manufactures: woolens, paper. Riverside Amusement Park. Robinson State Park.

ALFORD—Population 212. Alford Brook. N.Y. N.H. & H. R.R.

AMHERST—Includes North Amherst, South Amherst, Cushman. Population 7,089. Elevation 200 feet. Fort River, Freshman River. B. & M. and C.V. railroads, freight. Manufactures: leather goods. 2 banks. 4 hotels. Amherst College. University of Massachusetts. Numerous museums and exhibits. Onetime residents include Emily Dickinson, Helen Hunt Jackson, Eugene Field, Noah Webster, Robert Frost, Martha Dickinson Bianchi and Ray Stannard Baker (David Grayson).

Ashfield—Population 900. Elevation 1,100 feet. B. & M. R.R., 10 miles. Wood-turning mill. Summer resort.

Becket—Includes Bancroft. Population 682. Employed, 400. Elevation 1,200 feet—1,900 feet. West Branch of Westfield River and tributaries, numerous ponds. N.Y.C. R.R. Several small inns and tourist homes. Manufactures: paper, ash and canvas baskets, lumber. Half-dozen summer camps. Largest summer resort in Berkshires. Winter ski area.

Belchertown—Includes South Belchertown, Dwight. Population 3,861. Elevation 500 feet. Falls River. B. & M. R.R. 2 hotels.

Blandford—Includes North Blandford. Population 521. Elevation 1,500 feet. N.Y.C. R.R., 4 miles. 1 hotel. Agricultural products. Summer and ski resort.

Brimfield—Includes East Brimfield, West Brimfield. Population 1,012. Elevation 650 feet. N.Y.C. and C.V. railroads, 8 miles. Chiefly agricultural. Brimfield State Forest.

Buckland—Population 1,527. Employed, 550. Elevation 740 feet. Deerfield River, Clesson River. B. & M. R.R. Manufactures: cutlery, radio cabinets, finished lumber. Farming.

Charlemont—Includes Zoar. Population 812. Employed, 450. Elevation 500 feet. Deerfield River, several brooks. B. & M. R.R. Manufactures: wood turned products. 1 inn. Ski center.

Cheshire—Includes Farnams, Cheshire Harbour. Population 1,600. Employed, 400. Elevation 2,500 feet. Hoosac River, Hoosac Lake. N.Y.C. R.R. 1 hotel. Manufactures: quartzite and gypsum products. Farnam's, ski resort.

Chester—Includes North Chester, Chester Hill, Littleville. Population 1,253. Elevation 100 feet. Westfield River, Walker Brook. N.Y.C. R.R. ("Jacob's Ladder," Chester to West Becket). 2 hotels. 1 bank. Manufactures: granite, emery, grinding wheels. State Forest park; Skyline Trail; Sanderson Brook Falls.

Chesterfield—Includes West Chesterfield. Population 375. Elevation 1,450 feet. Westfield River and tributaries. N.Y. N.H. & H. R.R., freight, 6 miles; passengers, 15 miles. Manufactures: lumber, saw and plane handles.

Chicopee—Includes Chicopee Falls, Aldenville, Willimansett, Fairview. Population, 44,600. Employed in industry, 15,000. Elevation 75 feet—245 feet. Connecticut River, Chicopee River. B. & M. R.R., freight station in Chicopee; passenger stations, Springfield and Holyoke, 3 miles. Westover Army Air Field, military craft only. Manufactures: automobile tires, drop forgings, sporting goods, toilet accessories, cotton products, surgical bandages, knit goods, firearms, boys' clothing, fabricated steel, paper boxes, millinery, ladies' underwear, meat products, bobbins, store furniture, paper-making chemicals, office fixtures, radio parts, precision parts, metal etchings, shoes. 4 banks. 8 hotels. College of Our Lady of the Elms. 5 libraries. 21 public schools.

CLARKSBURG—Population 1,500. Employed 1,000. North Branch of Hoosac River. B. & M. and N.Y.C. railroads, 2½ miles. Manufactures: woolen goods. 2 hotels.

COLRAIN—Includes Lyonsville, Griswoldville, Shattuckville, Elm Grove, Adamsville. Population 1,497. Elevation 600 feet. North River, Green River. B. & M. R.R., 6 miles. Manufactures: textiles. Farming.

CONWAY—Population 950. Employed 75. South River. B. & M. R.R., 6 miles. 2 banks. Manufactures: taps and dies. Marshall Field Library. Many summer homes.

CUMMINGTON—Includes West Cummington, Swift River. Population 610. Elevation 1,500 feet. Westfield River. N.Y. N.H. & H. R.R., freight station, 12 miles. Small wood-working factory. Agricultural products. William Cullen Bryant homestead. Summer schools of music.

DALTON—Population 4,367. Elevation 1,199 feet. East Branch of Housatonic River. N.Y.C. R.R. 1 hotel. Manufactures: paper, woolens. Good municipal sports facilities.

DEERFIELD—Includes South Deerfield, East Deerfield, West Deerfield, Wapping. Population 3,046. Elevation 160 feet. Deerfield River, Connecticut River. B. & M. R.R. 1 bank, 3 hotels. Manufactures: leather goods, fertilizer, pickles. Agricultural products. Deerfield Academy (boys). Eaglebrook School. The Bement School. Memorial Hall (historical museum).

EAST LONGMEADOW—Population 4,321. Elevation 50 feet—450 feet. N.Y. N.H. & H. R.R.; Manufactures: package machinery, wood-working. Brownstone quarries.

EASTHAMPTON—Includes part of Loudville, Mount Tom. Population 10,578. Employed 2,009. Elevation 188 feet. Manhan River, several ponds. B. & M. and N.Y. N.H. & H. railroads. 4 miles. Manufactures: cotton goods and small wares, textile finishing, furniture and fixtures, shirts, rubber goods, home products. 3 banks. Williston Academy (boys). Mount Tom State Reservation, outdoor recreation facilities, amphitheatre, museum. Summer and winter sports.

EGREMONT—Includes North Egremont, South Egremont, West Egremont. Population 563. Employed 200. Elevation 750 feet. Green River, Prospect Lake, Goodale Brook. N.Y. N.H. & H. R.R., 5 miles. 4 hotels. Dairy farming. Summer and ski resort.

ERVING—Includes Farley, part of Millers Falls. Population 1,500. Millers River. B. & M. and C.V. railroads. Manufactures: paper, tools, wood heels, hand and electric tools. Laurel Lake recreation area. Crystal Notch ski slopes.

FLORIDA—Includes Hoosac Tunnel, Drury. Population 420. Employed, 100. Deerfield River. B. & M. and H.T. & W. railroads; N.Y.C. R.R., 8 miles. Whitcomb Summit on Mohawk Trail, one of the most famous views in New England.

GILL—Includes Riverside, Mt. Hermon. Population 931. Elevation 300 feet. Connecticut River, Falls River. B. & M. R.R. Farming section. Mt. Hermon School (boys).

GOSHEN—Includes Lithia. Population 300. Elevation 1,400 feet. Westfield River, smaller streams. N.Y. N.H. & H. R.R. 6 miles; B. & M. R.R., 12 miles. Manufactures: lumber. Famous "Whale Inn"; D.A.R. State Forest.

Gen. Joseph Dwight House, Great Barrington

GRANBY—Population 1,143. Employed, 600. Elevation 236 feet. Bachelor Brook. B. & M. and N.Y. N.H. & H. railroads, 6 miles. Dairy farming.

GRANVILLE—Includes West Granville. Population 670. Elevation 1,000 feet. N.Y.C. and N.Y. N.H. & H. railroads, 9 miles. Manufactures: lumber, wooden boxes, toy drums.

GREAT BARRINGTON—Includes Housatonic. Population 6,232. Elevation 726 feet. Housatonic River. N.Y. N.H. & H. R.R. Private commercial airport, 2 miles west southwest. 2 banks. 1 commercial hotel, 2 summer hotels. Manufactures: paper, bedspreads, sheets, pillow cases. Barrington School for Girls; Altaraz School; Berkshire Hills School. Monument Mountain and Green River, made famous in poems of William Cullen Bryant.

GREENFIELD—County seat of Franklin. Population 17,020. Elevation 300 feet. Green River. B. & M. R.R.; (beginning of Mohawk

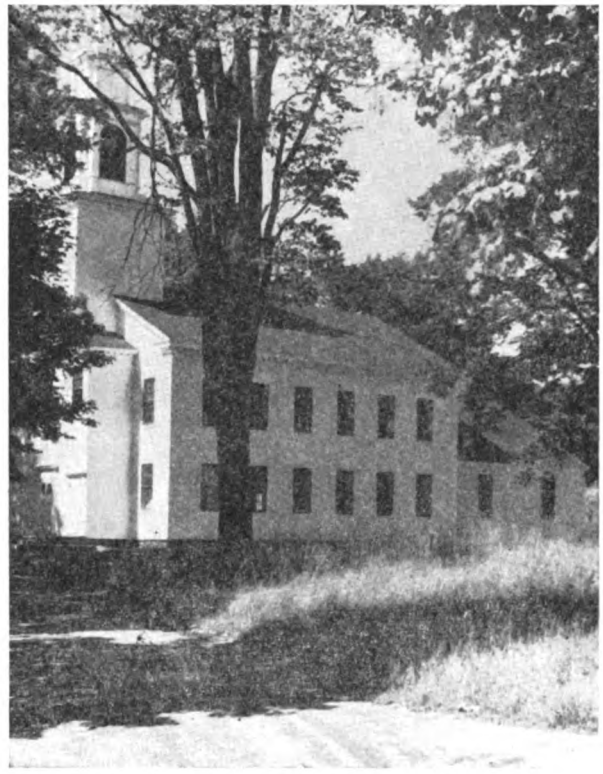
Trail to North Adams). 5 banks. 3 hotels. Manufactures: taps and dies, small tools, sterling silverware, wood products, machinery, airplane parts. Stoneleigh-Prospect Hill School (girls). Summer and winter municipal sports facilities.

HADLEY—Includes North Hadley, Hockanum. Population 2,700. Elevation 130 feet—1,205 feet. Connecticut River, Fort River, Mill River. B. & M. R.R. Commercial seaplane base, South Hadley. Manufactures: tobacco processing, hand tools. Mt. Holyoke Reservation. Farm Museum.

HAMPDEN—Population 1,153. Elevation 600 feet —1,000 feet. Scantic River. N.Y. N.H. & H. R.R., 6 miles. Chiefly farming and residential section.

HANCOCK—Population 332. N.Y.C. R.R., 14 miles.

HATFIELD — Includes North Hatfield. West Hatfield, Bradstreet. Population 2,188. Connecticut River. Mill River. B. & M. R.R., West Hatfield. Manufactures: Laths. Valuable agricultural section.



Congregational Church at Hinsdale

HAWLEY — Includes West Hawley, East Hawley. Population 257. Employed 100. Elevation 1,600 feet. Chickley River. B. & M. R.R., 4 miles. Manufactures: wood turned products, maple syrup. Chiefly farming and dairying. Chickley Alp Ski Center.

HEATH—Includes North Heath. Population 359. Elevation 1,830 feet. West Branch River. B. & M. R.R., 5 miles. Lumber and agricultural products.

HINSDALE—Population 1,276. Employed 400. Elevation 1,500 feet. East Branch of Housatonic River, Ashmere Lake, Plunkett Lake. N.Y.C. R.R. No present manufactures. At one time, had 5 woolen-mills—workers now employed in Dalton and Pittsfield. Summer Hotels.

HOLLAND—Population 400. N.Y.C. R.R., 15 miles. 1 hotel. 2 lakes.

HOLYOKE—Population 56,000. Connecticut River and 4½ miles of canals. District steam service available for industrial use. Factory space for rent and mill sites for lease or sale from Holyoke Water Power Co. B. & M. and N.Y. N.H. & H. railroads. Commercial sea-plane base, 3 miles north at South Hadley. Manufactures: papers

First Baptist Church, Lanesborough

of all kinds, textiles, copper and steel wire, insulated wire, mill knives, wire cloth, air compressors, refrigerating units, foundry products, machine tools, rolling mill products, hardware, cutlery, leather belting, corsets, sportswear, name plates, toys, games, boxes, magazines, directories, yarns, threads, hosiery. "The Fine Writing Paper Center of the World." 250 acres of parks and playgrounds. State Reservation. Mount Tom, recreational facilities.

HUNTINGTON—Population 1,300. Employed, 400. Westfield River. N.Y.C. R.R. 1 hotel. Manufactures: textiles, paper, grinding wheels. Norwich Lake, summer resort.

LANESBORO—Includes Berkshire. Population 1,556. Elevation 1,160 feet. N.Y.C. R.R., 7 miles.

LEE—Includes East Lee, South Lee. Population 4,500. Employed 1,700. Elevation 1,200 feet. Housatonic River, Laurel Lake, Greenwater Pond, Goose Pond, Finerty Pond. N.Y. N.H. & H. R.R. 2 banks. 2 hotels. Manufactures: paper (cigarette, condenser, Bible, filter, photo-writing, glassine), agricultural lime, paper machinery, ladies' nightwear. Jacob's Pillow School of Dance; Foxhollow School (girls); Cranwell Prep. (boys); year-round resort.

LENOX—Includes New Lenox, Lenox Dale. Population 2,951. Elevation 1,257 feet. N.Y. N.H. & H. R.R. Housatonic River, Yokun Brook. Manufactures: paper. 2 banks. 3 hotels, several smaller inns. Several private schools. Berkshire Symphonic Festival; theatrical school; art school; Lenox Library (one of leading libraries in the East). Famous summer resort.

LEVERETT—Includes North Leverett, Moores Corner, East Leverett, Long Plain. Population 688. C.V. R.R., 5 miles. Manufactures: charcoal. Mount Toby State Reservation. Rattlesnake Gutter, famous for wild, natural scenery.

LEYDEN—Population 253. Elevation 1,400 feet. Green River. B. & M. R.R., 10 miles. Dairy farming.

LONGMEADOW—Population 5,790. Strictly residential; no industrial zone.

LUDLOW—Population 8,065. Employed 2,000. Elevation 240 feet. Chicopee River, several large brooks. N.Y.C. R.R. 1 bank. Manufactures: jute. Good recreational facilities.

MIDDLEFIELD—Population 226. Elevation 1,800 feet. East River. Factory Brook. N.Y.C. R.R. 2 inns. Farming section.

MONROE—Monroe Bridge, the only village. Population 178. Employed 60. Elevation 1,100 feet. Deerfield River. B. & M. R.R. and H.T. & W. R.R., 7 miles. Manufactures: paper.

MONSON—Population 5,662. Employed 700. Elevation 725 feet. Chicopee Brook. C.V. R.R., 1 mile. 1 hotel. 2 banks. Manufactures: textiles, plastics, Monson Academy; Paradise Lake (resort).

MONTAGUE—Includes Montague Center, Lake Pleasant, Turners Falls, part of Millers Falls. Population 8,000. Employed 2,025. Elevation 195 feet. Connecticut River. B. & M. and C.V. railroads; Private commercial airport, 4.2 miles north. 2 banks. 3 hotels. Manufactures: paper, fishing rods, cotton cloth, machinery.

MONTEREY—Population 305. Elevation 1,600 feet. Lake Garfield, Lake Buel, Konkapot River. N.Y. N.H. & H. R.R. 1 hotel. Lake areas adapted to summer resorts and recreational summer camps.

MONTGOMERY—Population 178. N.Y. N.H. & H. and N.Y.C. railroads, 5 miles.

MT. WASHINGTON—Population 50. Elevation 1,600 feet. N.Y.C. R.R., 5 miles west at Copake Falls, N. Y. Bash Bish State Forest, Mt. Everett Reservation.

NEW ASHFORD—Population 105. Employed, 50. Elevation 1,240 feet. Green River, B. & M. R.R., 9 miles; N.Y.C. R.R., 11 miles. 1 hotel. Ski resort.

NEW MARLBORO—Includes Hartsville, Southfield, Clayton, Mill River. Population 956. Konkapot River. N.Y. N.H. & H. R.R., 10 miles. Manufactures: belt pins, tennis strings, leather, hammers. Agricultural products.

NEW SALEM—Includes North New Salem, Cooleyville. Population 364. Elevation 1,100 feet—1,307 feet. Several streams. B. & M. R.R., 7 miles. (Daniel Shays Highway). Lumbering, farming. New Salem Academy (founded 1795). Quabbin Reservoir, 38 square miles, Boston water supply. Scenic drives.

NORTH ADAMS—Includes Briggsville. Population 22,230. Elevation 700 feet. Hoosac River. B. & M. and N.Y.C. railroads; Private commercial landing field, 2.8 miles west southwest. Manufactures: print cloth, worsted and woolens, cottons, silks, mercerizing, bleaching, condensers and capacitors, shoes, crackers, cookies, textile machinery, cigars, packing cases, lumber. 4 banks. 2 hotels. State Teachers College. Ski center. Western end of famous Mohawk Trail.

NORTHAMPTON—County seat of Hampshire. Includes Florence, Leeds, Bay State. Population 24,794. Employed in industry 3,500. Elevation 110 feet—400 feet. B. & M. and N.Y. N.H. & H. railroads. Land and seaplane base, 1.2 miles east northeast. Manufactures: hosiery, brushes, cutlery, silverware, caskets, wood cabinets, ladies' hats, potato chips, candy, woven labels. 6 banks. 5 hotels. Smith College, Northampton School for Girls, Northampton Commercial College, Clarke School for the Deaf. 18 public schools, 4 parochial schools.

NORTHFIELD—Includes East Northfield, Northfield Farms. Population 2,060. Elevation 325 feet. Connecticut River. B. & M. and C.V. railroads; No manufacturing at present, but several good locations. 1 hotel. Northfield Seminary (girls). Headquarters, American Youth Hostels, Inc.

ORANGE—Includes North Orange, Tully. Population 5,762. Elevation 625 feet. Millers River, Lake Rohunta. B. & M. R.R. Orange Airport, 1.5 miles southeast. 2 banks. Manufactures: tapioca, machinist's tools, needles, textile machinery, water wheels.

OTIS—Includes East Otis. Population 366. Elevation 1,500 feet. Farmington River. N.Y.C. and N.Y. N.H. & H. railroads, 13 miles. 2 hotels.

PALMER—Includes Three Rivers, Thorndike, Bondsville. Population 9,564. Employed 3,500. Elevation 400 feet. Quaboag River, Ware River, Chicopee River. N.Y.C. and C.V. railroads; Private

commercial airport, 5 miles north. 2 banks. 2 hotels. Manufactures: wire and wire rope, printed textiles, paper, cartons, hygienic tampons, metal culverts, brushes, metal ladders, casters and trucks, pinion rod and pinion wire, plastic products.

PELHAM—Population 550. Employed 200. Elevation 700 feet. Dam and mill site available. B. & M. and C.V. railroads, 2 miles.

PERU—Population 142. N.Y.C. R.R., 4 miles.

PITTSFIELD—County seat of Berkshire. Population 53,560. Employed in industry, 13,539. Elevation 1,037 feet. Housatonic River. N.Y.C. and N.Y. N.H. & H. railroads. Municipal airport, 2.5 miles south. Manufactures: bakery goods, toys, buttons, clothing, electrical machinery and supplies, paper, paper making machinery, plastics, printed office supplies, stationery, textiles. 7 banks. 8 hotels, conference and convention facilities. Berkshire Athenaeum (public library); City Directory Library; Berkshire County Law Library. Berkshire Museum. 28 parks and playgrounds. Several lakes. Winter sports. Home of Oliver Wendell Holmes.

PLAINFIELD—Population 264. Elevation 1,800 feet. Three small streams. B. & M. R.R. Farming, lumbering. Summer homes.

RICHMOND—Includes Richmond Furnace, Richmond Summit. Population 648. Elevation 1,026 feet. Richmond Pond, several small ponds and brooks. N.Y.C. R.R. 1 hotel. Formerly were iron mines and furnaces, lime kilns. No present manufactures.

ROWE—Includes Davis Mines. Population 286. Elevation 1,100 feet—1,400 feet. Pelham Lake, Pelham Brook. B. & M. R.R., 2 miles. Small inn. Lake recreation area.

RUSSELL—Includes Cresent Mills, Woronoco, Woronoake Heights. Population 1,221. Employed 500. Elevation 600 feet. Westfield River. N.Y.C. R.R. 2 hotels. Manufactures: glassine, writing, drawing, book, blueprint, specialty and card papers; synthetic leather.

SANDISFIELD—Includes New Boston, Montville. Population 470. Employed 225. Elevation 1,000 feet. West Branch of Farmington River. N.Y. N.H. & H. R.R., 15 miles. 3 hotels. Manufactures: lumber. 5,000 acres State Forest and Lake recreation area.

SAVOY—Includes Brier Post Office. Population 303. Employed 40. Elevation 2,600 feet. Westfield River originates here—very soft water. N.Y.C. R.R., 9 miles. Lumber. Farming. Suitable location for canning factory, small shoe factory. State Forest, 11,000 acres.

SHEFFIELD—Includes Ashley Falls. Population 1,752. Elevation 624 feet. Housatonic River, Konkapot River, several ponds and brooks. N.Y. N.H. & H. R.R. 1 inn. Dairying. Dolomite plant. Bartholomew's Cobble, public reservation.

SHELBURNE—Includes Shelburne Falls. Population 1,656. Employed 500. Elevation 425 feet. Deerfield River, North River. B. & M. R.R. Manufactures: mechanics' tools, electric power. 2 banks. Famous "Bridge of Flowers."

SHUTESBURY—Includes Locks Village. Population 300. Elevation 1,300 feet. C.V. R.R., 9 miles. Residential and summer recreation area. Lake Wyola, fishing and swimming.

SOUTH HADLEY—Population 7,352. Employed 500. Connecticut River. B. & M. R.R. 1 inn. Manufactures: paper. Mount Holyoke College. Skinner State Park. Dinosaur tracks.

SOUTHAMPTON—Population 1,202. Elevation 300 feet. Manhan River. N.Y. N.H. & H. R.R. Manufactures: sheet metal products

Arms House, Shelburne

(air ducts, stove pipes, elbows). Hampton Ponds, summer recreational area.

SOUTHWICK—Population 1,885. Elevation 240 feet. Congamond Lakes, Powdermill River. N.Y. N.H. & H. R.R., freight station, Southwick; N.Y. N.H. & H. and N.Y.C. railroads, passenger station, 5 miles. Agricultural and residential section. 1 inn, several tourist homes. Popular summer and winter recreation spot.

SPRINGFIELD—County seat of Hampden. Population 149,554. Employed 58,257. Elevation 75 feet—200 feet. No bodies of water for industrial use available within present city limits. N.Y.C., B. & M. and N.Y. N.H. & H. railroads. Private commercial airport, 2.3 miles northeast. Also American Airlines, Northeast Airlines, Wiggins Airlines at Barnes Airport, 11 miles; United Airlines, Eastern Airlines at Bradley Field, 14 miles. Manufactures: textiles, knit goods,

electrical equipment, electronic devices, precision tools, clothing, machines and machine tools, elevators, lawn mowers, games and toys, paper boxes, leather goods, valves, paper and paper products, bakery goods, beverages, wooden bobbins, universal joints, matches, ice cream, books, magazines, heating and airconditioning equipment, air compressors, patterns and castings, grinding wheels and abrasives, meat products, motorcycles, underwear, plastics, wooden boxes, packaging machinery, handbags, fire arms, sporting goods, tires and tubes, wire. 10 banks. U. S. Customs House. Eastern States Exposition, in West Springfiled, ¾ mile. Court Square Theatre (legitimate stage); Springfield Symphony Orchestra; Municipal Auditorium; Barney Institute (industrial museum). City Library, 6 branches; Fine Arts Museum. Springfield College; American International College. 72 parks including famous Forest Park with zoo, gardens, ice skating, tennis courts. Municipal golf courses, bathing beach.

STOCKBRIDGE—Includes Glendale, Interlaken. Population 1,815. Elevation 1,200 feet. Housatonic River, Lake Mahkeenac. N.Y. N.H. & H. R.R. 1 bank. 1 commercial hotel, 4 summer hotels, several tourist homes. Popular summer residential section. Cranwell School. Jesuits College.

SUNDERLAND—Includes North Sunderland. Population 1,085. Employed 500. Connecticut River. B. & M. R.R., 2 miles. Agricultural section. Mount Toby State Reservation.

TOLLAND—Population 125. Elevation 1,800 feet. Otis Reservoir. N.Y.C. and N.Y. N.H. & H. railroads at Westfield, 20 miles; N.Y. N.H. & H. R.R. at Winsted, Conn., 10 miles. Farming and lumbering. Summer camps, dude ranch.

TURNERS FALLS—See MONTAGUE.

TYRINGHAM—Population 242. Elevation 1,200 feet. Hop Brook. N.Y. N.H. & H. R.R., 5 miles. 'Manufactures: hand rakes.

WALES—Population 354. Employed 200. Elevation 900 feet. Overflow from Lake George flows through series of ponds and dams to Quaboag River, mill sites available. N.Y.C. and C.V. railroads, 7 miles. 2 hotels. Lake George summer residence area. State Forest. Tupper Hill Wildlife Refuge.

WARE—Population 7,578. Elevation 423 feet. Ware River. N.Y.C. and B. & M. railroads. 3 banks. 2 hotels. Manufactures: woolens, hats, shoes, underwear, dresses, preserves, castings.

WARWICK—Population 444. B. & M. R.R., 7 miles. 1 hotel. Mount Grace State Reservation. Laurel Lake recreation area.

WASHINGTON—Population 267. Employed 170. Elevation 2,000 feet. N.Y.C. R.R. State Forest, 10,000 acres.

WENDELL—Population 391. Employed 100. Elevation 1,312 feet. Millers River, Bowen's Pond. B. & M. R.R. Farming. Summer residences.

WEST SPRINGFIELD—Population 19,460. Employed 6,374. Elevation 50 feet—300 feet. N.Y.C. R.R. and freight yards. Connecticut

River, Westfield River. 1 hotel. 3 banks. Manufactures: paper, fiber boxes, machine gears, chemicals, paints, gasoline station tanks and pumps, tin, solder, type metal, brooms, wood boxes, bound books, magnetos, machine tools, trailer trucks, hydraulic pumps, agricultural products. Eastern States Exposition grounds.

West Stockbridge—Population 1,200. Employed 500. Elevation 1,200 feet. Williams River. N.Y. N.H. & H. R.R. Manufactures: rock wool, limestone products. Interested in further industrial development. 1 hotel. Municipal year-round recreational facilities.

Westfield—Population 20,000. Elevation 155 feet. Little River, Westfield River, N.Y.C. and N.Y. N.H. & H. railroads; Barnes Airport (Class 4) daily passenger, mail, express service via American Airlines. Manufactures: cast iron boilers and radiators, bicycles, small foundry parts, textile and special machinery, whips, thread, brushes, envelopes and paper products, mops, brick, woodworkings, fish lines, celluloid products, wood and paper boxes, grinding and abrasives, small hardware, greeting cards, nameplates, trap rock and marble, plumbing supplies, precision tools, electrical motors, novelties and games, factory-built houses, needles, ice cream. 5 banks, Westfield State Teachers College. Several parks; "Grandmother's Garden" (old fashioned flowers and herbs); many nearby lakes with summer homes and recreational facilities.

Westhampton—Includes part of Loudville. Population 410. Elevation 625 feet. B. & M. and N.Y. N.H. & H. railroads; Manufactures: wood turnings.

Whately—Includes West Whately, East Whately. Population 979. Employed 350. Elevation 190 feet—500 feet. No considerable water power available. B. & M. R.R., freight. Manufactures: tobacco processing (seasonal), wood-working. Farming.

Wilbraham—Population 3,442. Elevation 800 feet. Chicopee River, N.Y.C. R.R. Manufactures: paper, potato chips, wire products. Wilbraham Academy.

Williamsburg—Includes Haydenville. Population 1,828. Elevation 530 feet. East and West branches of Mill River. N.Y. N.H. & H. R.R. Manufactures: brass, hardware, poultry battery brooders, wood products. 1 bank. 1 hotel. Petticoat Hill Ski Tow and State Reservation.

Williamstown—Population 4,623. Elevation 703 feet. Hoosac River, Green River. Unusually pure water from wells. B. & M. R.R. Private commercial airport, 4 miles southwest. 2 hotels. 2 banks. Manufactures: photographic films and papers, electrical wires, carbonated beverages (made from natural warm springs). Williams College. Pine Cobble School. Buxton School. Lawrence Art Museum. Sheep Hill Ski slopes. Widest main street in the Commonwealth.

Windsor—Population 314. N.Y.C. R.R., 6 miles.

Worthington—Includes South Worthington, Ringville, West Worthington. Population 471. Elevation 1,600 feet. N.Y.C. R.R. Farming. 2 hotels.

The Wason Car Works of Springfield

By Donald E. Shaw

In the autumn of 1839, the first railroad train to enter Western Massachusetts made local history when it steamed into Springfield from Worcester over the newly opened Western Railroad (now the Boston & Albany); and ever since that time, Springfield has occupied a strategic place in the transportation firmament. Many of the city's basic industries have been built up around the needs of the railroads, to which they have supplied a wide variety of materials and products, ranging all the way from cotton waste to complete locomotives and cars. Chief amongst all these was the business which was founded by the brothers Thomas W. and Charles Wason, shortly after the first railroad was opened into Springfield,—a business which, as one of the first car building concerns in America, was to grow steadily in the scope and magnitude of its operations, to finally become one of the leading enterprises of its kind in the world.

Although through the changing fortunes of the car building industry, the company was to lose its full independence in later years through corporate merger, Wason's product never lost its individuality,—and even today, nearly twenty years since its factory doors were closed for good, a variety of products bearing the famous Wason name-plate can be found in active service in many far corners of the globe, in tribute to the high quality of sturdy Yankee craftsmanship that had fashioned them.

The distinction of being the oldest railroad passenger car building firm in the United States has sometimes been claimed on behalf of Wason,—which with some qualifications, is close to the truth, since this firm was one of the first to start railroad car manufacture without having a background of earlier carriage building, and with only the inherent mechanical ability of its founders to justify its entrance into a brand-new field of activity.* However, the most interesting aspects of its history center about other things,—chiefly the men who made it what it was, and who left, in the name of Wason, a permanent heritage of outstanding achievement seldom matched by a single industrial enterprise of comparable size in this whole wide land of ours.

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* Actually, it can more rightly be said that Wason's varied products were probably marketed over a greater spread of years under one trade-name than was the output of any other well known American car builder. Stephenson in New York, Davenport & Kimball in Boston (later Davenport & Bridges of Cambridge), Osgood Bradley in Worcester, and others had preceded Wason in the railroad car building field by a decade or more. For such early stage coach and carriage builders as these, the transition to car building in the early 1830s was relatively easy,—about all that had to be done in order to build a railway car in those days was to take a stage coach and put flanged wheels under it. Of these earliest companies in the field, only Osgood Bradley was still in business up until recent years—and his works, now the Worcester plant of Pullman-Standard, and still building cars and buses today, would seem to be entitled to top honors for continuity of operations in this line, under one name or another. Nor should we forget the Goold Company of Albany, New York, which built what were doubtless America's first railway cars for the Mohawk & Hudson RR. away back in 1831. Goold, a small enterprise, is still in business today but is now engaged in automobile body work.

Business was bustling in and around Springfield as the year 1839 drew to a close,—particularly with respect to railroading and railroad supply. By December first, barely two months after the first train had come puffing proudly into town from the east, bids were out for the construction of a railroad bridge across the Connecticut. This was completed in 1840, and the Western Railroad was pushed steadily westward through the hills toward Pittsfield and the Hudson, at a cost that reached a then-record high of $134,000 a mile through the most difficult terrain of the Berkshire summit. It seemed that almost everybody in the neighborhood of Springfield was either working for the railroad, providing it with laborers or supplies, cutting ties or bridge timbers,* building cars or otherwise serving the needs of this new medium of transport, either directly or indirectly. It was against such a background that the industry which we are about to describe, got its start.

Two brothers, Thomas W. and Charles Wason, had come down into Massachusetts from their native Hancock, New Hampshire, to work in the cotton mills of Cabotville (now Chicopee), where we find Thomas Wason at the age of thirty, foreman of the repair shop. In 1845 the brothers removed to Springfield, which was only a few miles further down the Connecticut River, and went to work preparing timbers for new railroad bridges, from a location on the east bank of the river near what is now the foot of Cypress Street. With the double tracking of the Western Railroad, and the building of two other new railroads out of Springfield, timbers and other materials were being needed in larger quantities than ever, and Springfield was of course the logical supply center. Upon starting up their small business here, the brothers Wason appear to have also undertaken the building and repairing of freight and gravel cars for the new Connecticut River Railroad, which was now being pushed northward towards Greenfield. At this time, the brothers' principal stock-in-trade seems to have been skill, perseverance and energy. It was said that the shed in which the body of the first freight car was assembled was so small that the car had to stand partly out of doors; furthermore, that the car was fashioned virtually without machinery or adequate tools for such work. At any rate, their first year's work for the Connecticut River Railroad included six single truck and two double truck freight cars, worth $4,700.

This was in 1845. In the following year, as their little business gave promise of further development, the Wasons, who whimsically enough, called their shop "The Boston Car Works" in the early days, removed from their original location near the Connecticut River bridge, to land which they had leased on Liberty Street and where they put up a shop in which, for the first time, they were able to

* There were some 25 crossings of the Westfield River or its tributaries for the Western Railroad to bridge between Russell and Washington, Mass.—a distance of only 22 miles.

undertake car building on a relatively large scale. Here the business steadily expanded during the next two years.*

By 1848 it was time to move once more. In that year, the Wasons were in position to lease a portion of the new building on Lyman street, which had been erected in the autumn of 1847 from the designs and under the supervision of Amasa Stone for the Springfield Car & Engine Company, a singularly unprosperous and short-lived concern. The stock and tools of the car department of this concern were purchased by the Wasons in connection with moving into the premises. The westerly end of the building was to be occupied for some little time in the manufacture of locomotives by the firm of Blanchard & Averill, upon whose failure the business went into the hands of S. C. Bemis & Company. After an unprofitable period of running this business, the Bemis firm sold the tools and fixtures to the Hannibal & St. Joseph Railroad in Missouri,—and although the Western Railroad was still turning out many of its own engines in its shops here, commercial locomotive building was over in Springfield.

Not so for Wason's car manufacturing business, however. Its activities were still expanding.† It is interesting to note that the immediate vicinity of where Wason was then located, has been identified with some important phase of railroad or railroad-supported industrial activity for a century back. The old Nettleton Dam was at the easterly end of Lyman Street and a vaguely-remembered firm known as the "Nettleton Car Works" is believed to have functioned briefly at this location, in early days. Then came the Springfield Car & Engine Company, the Springfield Locomotive Works and Wason's car shops. In later years, the depot of the Springfield, Athol & Northeastern Railroad was at Spring and Lyman streets, which is now the westerly end of the Boston & Albany's so-called Summer Street yard. Numerous establishments on Taylor Street made journal boxes, springs, axles and castings of various kinds for the railroads.

In 1851 came dissolution of the original partnership of T. W. and Charles Wason, with Charles, the younger brother, removing to Cleveland and later to Chattanooga, where he was to engage in a similar work.

In the early days, the Wason brothers had bought their car wheels and most of their castings from the foundry of Henry Sizer. This foundry was bought out by T. W. Wason in the latter part of 1851, a short time after he had purchased his brother's interest in the original enterprise.

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* This was located a short distance east of Main Street. A part of the 1846 lease agreement specified that George W. Sizer, as lessor, would furnish steam motive power equivalent to 2 H.P. "for an average of 11 hours a day for each working day" for a ten year period. It is not known who directly succeeded Wason here, but in the 1870s the premises were being occupied by Roche Bros., machinists.

† In its lease of Springfield Car & Engine Company premises, made in June 1849, Wason got the use of all but two erecting stalls in which passenger cars under construction were then set up; the blacksmith shop next to the main building, containing 18 forges; additional land for storage purposes; good will and the benefit of all "proposals" then out.

After Charles Wason had retired from the business, and the Sizer foundry had been taken over, Thomas Wason carried on the car building activities alone for several years. In 1853, he took in as partners three of his principal mechanics, L. O. Hanson, Josiah Bumstead, and J. S. Mellen under the firm name of T. W. Wason & Co., and leased the entire Lyman Street premises in which they were located. The new firm started in on $20,000 capital, of which Mr. Wason furnished one-half and Messrs. Hanson, Bumstead and Mellen one-sixth each. Mr. Wason, however, retained separate control of the foundry portion of the enterprise under this arrangement.

According to a contemporary analysis of the company's operations of this period, Wason was employing one hundred fifty-six hands, and working up annually an amount of stock valued at close to $200,000. This stock consisted principally of "3,000 car wheels, 350 tuns of bar iron, 285 tuns cast iron, 196 car axles, 1,200 gross screws, 55,650 ft. of trimmings, 200 casks of nails, 929,000 ft. of lumber, 24,400 rubber springs, 5,000 yards of crimson plush, 10,000 lbs. of curled hair, 1,250 lbs. glue, 1,700 panes of German glass, 8,800 lbs. of mixed paint, 400 gallons of varnish, 150 packs of gold leaf, 17,500 lbs. Babbit boxes, 2,000 lbs. cotton waste, 512 tuns of coal and 1,200 gallons of oil." The amount of annual production was fifty passenger cars, seven baggage cars, three hundred freight and twenty-five handcars, the aggregate value of which was $295,000.

At the same time, Mr. Wason's separate foundry was using 1,600 tons of iron and five hundred ninety-two tons of coal annually, to the aggregate value of $84,262, and employing twenty-eight hands, in the casting of car and locomotive wheels.

In 1854 George C. Fisk succeeded Mr. Mellen in the partnership and, as thus constituted, the firm carried on without material change until April 17, 1862, when it was incorporated as the Wason Manufacturing Company with a capitalization of $75,000. It was under this name that the firm was to become well and favorably known on four continents during the ensuing years.

It was in 1862, incidentally, that the Congress of the United States had made four feet, eight and one-half inches the official standard gauge track width for the railroads of this country. At this time, the Wason car shops were giving work to from one hundred fifty to two hundred men, and turning out passenger, freight, emigrant, baggage and miscellaneous cars of all kinds in increasing numbers.

Shortly before, the firm had completed the first railway car order for export ever filled in this country. Received in 1856, the order was completed in 1858. It is doubtful if any of the company's officers of those days was in a position to realize what a tremendous volume of export trade their plant was to develop and maintain in the later years.

We find that Wason was also actively engaged in construction work for military uses during the Civil War. In 1861 the company had been busy turning out artillery carriages for the Union Army, in addition to carrying on its usual line of business.

About the time of the formation of the Wason Manufacturing Company as such, the firm had purchased for $50,000 the Lyman Street shops then being occupied by it from the Springfield Machine Company, (whose only existence had been a nominal one in the collection of rents, etc., following the demise of the Springfield Car & Engine Company).*

During all this time, the founding work which represents one of the larger items in car building, was being done outside, withal for some years past in Mr. Wason's own foundry.

We find the men of Wason's working hard, but having their fun, too,—often under official auspices and in a manner that would seem most unusual today. The Springfield *Union* in its issue of October 3, 1865, contained a lengthy account of the Wason clambake and outing of that year, when four hundred employees who had gotten off the train at Vernon (Vermont) Depot marched in procession to Heath's Grove accompanied by "The Army Band and applause."

There were speeches, presentation of gifts, and a baseball game between the painters and the woodworking crew, in which the painters frescoed their opponents to the tune of 29-1. There were also foot races and other field events. The affair was "conducted on strictly temperance principles", we are told. Presentations included four volumes of the *American Encyclopedia* to President George C. Fisk, and twenty-two volumes of Thackeray to H. S. Hyde, company treasurer,—these from the employees. Each gift cost one hundred dollars, we are informed. S. W. Ladd, foreman of the foundry, was presented with a valuable gold chain by Harry Yardell, on behalf of the foundrymen. Some of the lesser gifts were more on the humorous side,—Capt. Pierce, chief decorator, got some enormous paint brushes; H. E. Emery, assistant superintendent, was presented with a lengthy whip . . . and so on. We may presume that everybody had a grand time.

Despite the setback imposed by a $25,000 fire in 1867, the company's business continued to expand.

In June, 1868, came the union of the car shop and the foundry,† with an increase of the capital stock to $150,000, of which Mr. Wason put in one-half and Mr. Fisk one-quarter. The other two partners sold out their interests at this time and retired from the business. Mr. Hanson went to Troy, New York, where he acquired an interest in the car-building firm of Gilbert, Bush & Company.

With the varied activities of car building now all being conducted under the name of one concern, the enterprise was to continue without material corporate change for nearly forty years,—during which time,

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* A business block still known as the Wason Building, and which was for some years the property of the Hyde family but is now owned by New York City realtors, stands on a part of this site today.

† Previously conducted under the name of Wason, Ladd & Company (T. W. Wason, S. W. Ladd and G. W. Lawrence heading the concern), the foundry had been making car wheels exclusively. After the merger, Mr. Ladd was made superintendent of the foundry.

however, many important advances were to be made in the styles and methods of car design.

In his later years, Mr. Wason gave up more and more of the wearying details of management to his assistants.* When he passed away in 1870, his place was taken by George C. Fisk, who had indeed been the actual active head of the business for some time past.

This is perhaps as good a time as any to briefly recapitulate the company's position up to this time. The annual volume of business which in 1853, when the firm of T. W. Wason & Co. was formed, had amounted to $100,000 a year, had risen to $250,000 by the time of the organization of the corporation nine years later. By 1872, Wason business had reached the tidy sum of $1,400,000, and the plant's quarters had become utterly inadequate.

Expansion and Migration

Removal from the congested Lyman Street location had been decided upon early in 1871, as a matter of fact; and after looking over all the surrounding area for a likely site, the company finally chose for its new location the broad, fertile meadows bordering the east bank of the Connecticut River, just south of the Chicopee boundary line,—a district then known as "The Plains." In April of that year, Messrs. Fisk and Hyde personally purchased seventy-three acres of land, and promptly resold to the Wason Manufacturing Company a sixteen and one-half acre portion of it, which for the most part lay to the north of what is now Wason Avenue,—the best part of the estate, and upon which the erection of factory buildings was immediately started. It took several years for this work to be finished, and for the complete transfer of the company's operations from the old Lyman Street location to be fully effected.

Practically all of the "new" Wason property was within the confines of the city of Springfield, although a wee corner of the land projected into Chicopee, and upon which Wason paid, with utmost formality, an annual tax bill that for years didn't amount to more than seventy or eighty cents.

When Dr. J. G. Holland well-known author, who was to be later editor of *Scribner's Magazine,* left Springfield, his beautiful home on Rockrimmon Hill which he called "Brightwood"† was acquired by George Fisk, then vice president of Wason's. We may presume that it was another indication of Mr. Fisk's influence in Springfield affairs, that the entire district once known as "The Plains" took the name

* Mr. Wason's former residence at 270 Liberty Street, Springfield, with some alterations, is now the office of the Central Storage Warehouse. With a fireplace in virtually every room, and replete with fancy mouldings and staircase work, this one-time mansion is even today an interesting example of the architectural skills of an older era.

† The beautiful home itself, which had been built in Swiss chalet style in 1862, remained virtually unchanged until 1918, when, at about the time of Mr. Fisk's last illness, electric lights were first installed. Subsequently, four generations of Fisks and Dickinsons have lived there, until the place was finally vacated in the autumn of 1939, and was torn down shortly thereafter.

of Brightwood at the time that Wason moved to that area,—and has been known by this name ever since.

The migration of such an extensive industrial establishment as Wason's represented, might naturally be followed by the springing up around it of a more or less nondescript contributory settlement made up of small satellite businesses of various kinds, homes for workers, etc. This had been anticipated by the Wason management. Messrs. Fisk and Hyde had purchased much more land than the necessities of the car works demanded, in order, on the one hand to organize the new settlement in keeping with their own tastes and those of the company; and on the other hand, to have it in their power to choose their neighbors. The effects of this dominant policy were to be profoundly felt in the area for many years to come, and to a minor extent, is still evident today.

At any rate, new streets were laid out and business and dwelling sites judiciously distributed, in that part of the newly-acquired property which lay south of Wason Avenue.

The rest of this land immediately bordering on the Connecticut River Railroad was reserved for manufacturing, and the available lots were quickly taken up by plants friendly to Wason, and most of which, like Wason, had been cramped in previous quarters. N. W. Talcott's axle works was about the first of the smaller industries to be transplanted to a new site here. The Talcott firm worked in close association with Wason, to whom they furnished car axles,—virtually the only portion of the complete car that Wason's own plant did not itself supply.

Part of this land, which had once comprised the Rowland farm, was acquired by Messrs. S. W. Ladd, W. H. Paige, J. J. Moore and H. E. Emery,—all Wason officials,—and here residential streets were laid out and homes built.

The names of many of these one-time Wason officers have been perpetuated by the street names which can still be found in this area,—Fisk Avenue, Hyde Avenue, Moore Street, etc,—along with some of the well-built houses that were constructed here at that time.

As an indication of the esteem in which Wason's was generally held, we can do no better than quote an editorial in the Springfield *Republican* of August 4, 1873, when the transfer of the company's operations to its new location was still in process:

"We invite the attention of the public this morning to one of the most important of Springfield's specialties, the great car-making corporation founded by the late T. W. Wason, and ably carried on by his successors. Its beginning ante-dates that of any other company of the sort in this region, and has outlived many; its prosperity has been gained by honest, earnest, straightforward dealing and thorough management; its future is assured by the same means that have earned its high reputation. It has, in its removal, virtually founded a burgh of its own, whose tone will naturally be taken from itself. The record is an unblemished credit to the New England

character and it affords us pleasure to thus note the shining achievement of the Wason Manufacturing Co."

A news item in the same issue had this to say further:

"The village of Brightwood will have from the outset the advantages of the city. The Connecticut River Railroad have already engaged to stop there with all trains save the three through trains, and this arrangement will be put in force within a week * * *. A station and freight house are soon to be erected. Next year a train will run night and morning to the works from Springfield. The commutation fare has been fixed at $28. a year. Another means of access will be opened when North Main Street is made a reliable thoroughfare and the street railway gets ready to extend to Chicopee.

"Aqueduct mains already reach Brightwood. The gas light company has laid their mains to the car works and are ready to pipe houses or factories on demand. The village thus has every promise of being a valuable and considerable accession to the city, and many reasonably look forward to the time when it shall be an independent ward with a pair of councilmen and an alderman, a church or two and a grammar school, and by its excellent neighborly example, induce Chicopee back to the embrace of Springfield's maternal arms."

Although the city of Chicopee has never seen fit to return to Springfield's municipal fold, virtually every one of the other predictions were soon to materialize, along with many further advancements that could not have been visualized at that time.

Let us examine some of the noteworthy aspects of the great industrial plant that was rising in this "new city," in the early 1870s.

The office building, designed by Perkins & Gardner, was an architectural gem, replete with pleasing ornamentation and superb cabinet work in its interior. The main office counter was finished in solid black walnut, with French burl-walnut paneling,—designed and executed by Superintendent Paige. Mr. Fisk's office was finished in mahogany. The handsome mantels and mirror-frames were executed by H. W. Ellis, one of the company's employees.

The upper floor of the office building was planned for occupancy as a boarding and lodging house for a dozen or so single men, picked from among the plant's employees to form a hose company, and for whose care a landlady was engaged,—while, to make their abode the pleasanter, one room was fitted for a reading room and furnished with magazines and the New York and Springfield newspapers. A gong was also provided so that should the watchman on his rounds discover a fire, he could readily arouse the hose company, who might be expected to drown the incipient blaze without recourse to the city fire department.

This building, by the way, is shown in the background of most of the official builders' photographs of cars out-shopped by Wason since the '90s, and has often been the means of providing photographic

identification of the builder of cars whose origin might otherwise have been in doubt.

The new foundry was one hundred seventy feet long by sixty-two feet wide, and thirty-five feet high to the apex of its deck roof. It had three McKenzie cupolas melting twelve tons a day, two being used for car wheels and one for floor castings. After the wheels left the molds, they were taken to pits where they remained three days. In the core room, wheel cores were made from a mixture of rye-meal and yellow sand that was brought all the way from Waterford, New York, sand pits.

In the two-story machine shop, equipped with a Bement No. 30 hydraulic wheel press, the lower floor was devoted to heavy machine work, and the upper floor to lighter work. The pattern rooms were also on the second floor.

Connected with the machine shop on its northerly end was the spacious smith shop, with a wing for an iron room. This shop contained twenty-six side-fires with three large center forges for heavy work, a Waters patent 1,200 pound drop, and the usual deafening array of trip-hammers.*

The car-erecting shop twenty-five feet west began the next fellowship of buildings. It was one hundred seventeen feet long, contained five tracks and was used exclusively for building passenger car bodies. The car trucks were set up in the lower part of the two story building adjoining it to the north, the upper floor of which was used as the tin shop.

Westward from the car shop and separated from it by a fire wall, was a two hundred by sixty-two foot building, with a wing on the northwest for heavy woodwork. The cabinet shop occupied the entire area of the main building, while in the wing were the upholstery, varnish and seat-trimming rooms.

East of this wing and north of the main shop was another two-story addition, containing below the engine and boilers. The one hundred fifty horsepower Providence engine had a belt that was probably the most perfect specimen of its kind in the country. Made by Underwood & Company of Tolland, Connecticut, this belt, of double leather, one hundred twenty-two and one-half feet long and thirty inches wide and costing $1,000, had been exhibited at the American Institute Fair in New York City where it had won a premium the winter before it was installed at Wason's.

The engine itself was the pet of the workmen, who decorated it with an elegance seldom approached, from designs of Captain Pierce. It was nickel plated to every gauge. The bulge of the steam pipe above the chest bore the monogram of the company and the dates 1845 and 1873.

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* This part of the Wason plant was perhaps most interesting to "outsiders." The writer knows of at least one Springfield resident, who was a young lad at the time, and who tells of walking the considerable distance from his home to Wason's and spending half a day standing unnoticed in a corner of the foundry,—fascinated by what he saw.

The engine room was a gem of its kind, floored with southern pine, with ceiling and walls sheathed and delicately tinted, with wainscoting of black walnut and ash.

The boiler room adjoining contained three locomotive tubular boilers, of seventy-five horsepower each, made by Grimes of Springfield,—two for year-round power and one for winter heating. One of Berryman's patent-heaters, which sent the water into the boilers already warmed, was attached,—while above was mounted one of the water meter company's three-bell harmonizing gongs, the sound of which could be distinguished a mile away.

The chimney, eighty-five feet high, had 100,000 bricks. The room over the boilers was used for drying, while that over the engine was for veneering.

Right along the north side of Wason Avenue, the five hundred by seventy-five foot paint shop was erected. The building was of wooden construction, painted red with buff trim. It was divided into four sections by brick fire walls with iron doors, looking through the open arches of which was a most impressive sight. Here as many as thirty-two of the longest passenger coaches of that day could undergo final treatment, including the artist's touches of gold-leaf trimming, at the same time.

Opening towards the transfer table, the north side of this building was virtually "all doors." Paint stock was kept underground, in a fireproof cellar, and reached by a subterranean passage.

The roofs of these buildings were slated and tinned.

Masonry work was contracted for, with the Chicopee firm of McClallan & Son doing the job,—but every other item of work in the construction of this great plant was done by the day, and by the regular employees of Wason's.

Most of the area comprising the north, or main portion of the plant which was not occupied by buildings or the transfer table, was taken up by lumber yards and storage sheds,—twelve acres of them.

Later on, a truck shop was to be built on the south side of Wason Avenue—but the above-described buildings comprised essentially the Wason layout of the mid '70s.

One of the plant's unique features was the steam-operated transfer table, designed by Supt. W. H. Paige, and for most, if not all, the time it was in active use, operated by his brother Frank Paige. The table was equipped with a large cab housing the boiler etc., and had a cable and winch by means of which cars could be hauled right out of the shop buildings that were located on either side of the transfer table track.

The table was forty-two feet long, and could run the entire length of the yard (about 11,000 ft.) in about two minutes, with sixty pounds of steam.

The table had three rails on its track, so that it could accommodate cars of two gauges (narrow and standard). This was advisable because of the fact that Wason built so many cars for export to Central and South America and the Orient, where many of the rail-

roads were narrow gauge lines. As time went on, and larger and longer cars were being built, a flexible extension was made for the transfer table, which could be attached to either side of the table, increasing its working length to seventy feet. This was known as "The Jumbo". It was raised up when not in use, to permit the passage of the table up and down the yard. When the "Jumbo" was loaded and "down," objects within its clearance limits near the shop doors had to be moved so the table could get by.*

Officers of the Wason Manufacturing Company in 1873 were as follows:

President,—George C. Fisk
Treasurer,—Henry S. Hyde
Superintendent and Master Mechanic,—William H. Paige
Assistant Superintendent,—H. E. Emery
Foundry Superintendent,—S. W. Ladd
Paymaster,—John J. Moore
Bookkeeper,—F. S. Graves
Storekeeper,—Charles A. Fisk
Foreman, Passenger Car Body Department,—L. C. Packard
Foreman, Freight Car Body Department,—Stephen Danke
Foreman, Cabinet Department,—A. Nutting
Foreman, Paint Shop,—C. H. Wheeler
Foreman, Upholstering Shop,—J. W. Russell
Artist and Decorator,—Capt. E. C. Pierce
Smithy,—S. W. Wilson
Machinist,—W. J. Parker
Yard Overseer,—G. E. Brown
Carpenter Foreman,—Jas. Goodwin
Yardman,—E. S. Hutchins

Mr. Fisk was a remarkable man, and a self-made man in its truest sense. He had come to Springfield from Hinsdale, New Hampshire, at the age of twenty, and virtually penniless, to try his luck in the business world. He entered the employ of Wason's in 1853, became bookkeeper and cashier, and when the corporation was formed, he became its treasurer; then successively, vice president and president, which latter position he occupied for nearly forty years, during which time he managed the company's affairs with consummate skill and devotion. In his dealings with his men, Mr. Fisk was strict but fair. His adherence to the principles of temperance was almost fanatical in its intensity, and reflected itself in Wason policy. For many years, through Mr. Fisk's far-reaching influence, liquor establishments and even pool-rooms were kept away from immediate proximity to the plant, whose workers Mr. Fisk did not want to have exposed to their presence.

* In later years fitted with a new cab, the old Wason transfer table functioned until the end. During World War I, it was also equipped with a canopy to afford weather protection to the trainer biplanes then being assembled here for military use. During its half century of service, this table had borne nearly every type of vehicle or structure on wheels that man had devised, from bob-tailed horsecars to portable filling stations.

He was also constructively interested in his employees' recreational welfare, and was behind the construction of the Fisk Casino,* at Main Street and Wason Avenue, where company workers and others of artistic talent put on high-grade minstrel shows and other amateur theatricals over a period of years, under the name of the Calhoun Club. When the club disbanded, not so long ago, they ran up the American flag and distributed a seventy-five dollar "dividend" to each member,—a pretty good return on the two dollar membership dues!

Mr. Fisk was ever ready to give financial support to a worthy cause, particularly in his home town of Hinsdale, New Hampshire. One time he visited the town library, and noticed that there was no clock there. Shortly afterwards, a magnificent timepiece was received from an anonymous source, and it was only after persistent inquiry that Mr. Fisk admitted being the donor.

In the fall of 1913, the town was considering extensive repairs to the old covered bridge on Depot Street, when Mr. Fisk came forward with a gift of $5,000 towards a new steel structure.

With the acquisition of the Wason plant by outside interests in 1907, Mr. Fisk retired from the business.† It is recalled that in the fall of 1915, and while in his eighty-fifth year, Mr. Fisk achieved what must have been a record of a sort, by driving a horse and buggy all the way from Hinsdale, New Hampshire, to Springfield, over a sixty-mile route, being on the road for seven hours. He stopped only thirty minutes in Greenfield to refresh his horse and another thirty minutes in Northampton. The trip was made in his "Concord Rattler" wagon of which he was very proud, it being a replica, especially built for him, of one that he had used in his early days.

Mr. Fisk spent much time in his later years at his Springfield home, "Brightwood," and it was here, on the high slope overlooking the sprawling plant that he had supervised for so long, that this colorful and outstanding industrial executive passed away on April 17, 1918, in his eighty-eighth year.

Of these men who were guiding Wason destinies during its heyday as an independent concern, reference should also be made to Henry S. Hyde, who had come to Wason's at the time of its incorporation in 1862. Earlier the secretary of the company, he was later (1869) appointed treasurer, which position he continued to occupy for something over forty-five years!

Mr. Moore, who as paymaster was Wason's youngest officer, later left the company's employ to go to work for the newly-established electric light plant in Springfield, and he was in charge of the grand "illumination" of the city's Court Square in 1886, on the occasion

* Elsie's Cafe now occupies the site of the Fisk Casino which was torn down only a few years ago.

† Mr. Fisk had various other industrial interests, besides his important connection with Wason's. These included the Fisk Manufacturing Company, a soap manufacturing establishment which was located at the foot of Walker Street in Springfield for many years.

of Springfield's 250th Anniversary Celebration. Two hundred fifty of the new "incandescents" were strung among the elms of the square, and an arch was constructed across Main Street. From near and far, folks came to see and marvel at this new Wonder of the Age.

Two men who were to serve as Springfield's mayor and postmaster respectively, were one-time Wason employees.

William E. Sanderson, foreman, later a lumber buyer for the company, was Mayor of Springfield in 1907-8-9; while Louis C. Hyde fourteenth Postmaster of Springfield, serving from 1898 to 1914, was secretary of the Wason Manufacturing Company for some years, and later president of the Barney & Berry Company in the same city.

E. G. Washburn, later a prominent Springfield undertaker, was working as a cabinet-maker under Henry Paige at Wason's when he patented his well-known embalming fluid, to give him a start in an entirely different profession.

We should pause to give much more than passing notice here to Henry Paige, who was Wason superintendent for some years, and who played an important though generally unrecognized role in the development of the sleeping car, among other things.

William Henry Paige was born on February 14, 1842, and because the family was poor, went to work at the age of eight, his first job being with the Otis Company of Ware. He grew up without formal schooling to speak of, but developed a natural bent for mathematics and drafting, and was too proud to remain ignorant along other lines.

In 1861 he married Laura Ann Tubbs, of Tubbs Hill Farm, West Springfield. His wife was a girl of sturdy pioneer stock, and descendant of Myles Morgan, who had come here from England in 1636.

Paige was drafted for service in the Civil War, but with a child "on the way" he hired a substitute to serve in his place, a common practice at that time. The substitute was later killed in the war.

When his children were old enough to take part, they were accustomed to gather round the dining table, and with their father practice on expressing themselves in writing. At this time the elder Paige was taking a correspondence course known as "Gaskill's Compendium".

He owned and rode the first "velocipede" in Springfield; later he began tinkering with a single-wheel machine. A few revolutions of its great wheel were enough to send the rider quite a way down the road.

With his interest in mechanics, and his naturally inventive mind, it is not surprising that Paige became associated with the T. W. Wason firm. He began as a workman on freight car construction, and gradually worked his way up until with the retirement of Supt. L. O. Hanson, Paige was chosen for the post of vice superintendent. This was in 1868.

His daughter, Mrs. Zelda (Paige) Jenks, wrote of him a few years ago:

"I sometimes wonder how my father found time to cover all his tasks at Wasons. For years he was head draftsman . . . Every car had to be laid out on the floor of the main shed. The wheels were put on last, so Dad had to figure which car had to be finished first. There were usually fifty to sixty cars being constructed at one time.

"His office was up one flight of stairs in a loft—like a bird cage—in the main shed. On three sides were the drafting tables, and he had two helpers. On the fourth side he built a section of a sleeping car on which he tinkered for years, until at last he had his own car as he wanted it—the Paige Parlor and Sleeping Car which he patented in 1876."

Paige gave over thirty of his thirty-seven patents, to the Wason Company. However, he had decided not to release his sleeping car or car wheel patents, rather than do which he resigned from Wason's and opened a foundry of his own,—this for building car wheels; and with some financial backing, he constructed for Webster Wagner and the New York Central & Hudson River Railroad, three sleeping cars under his own patents.

Webster Wagner was superintendent of sleeping cars for the New York Central at this time, and Paige worked with him until the time of Wagner's tragic death among the flaming ruins of one of his own cars, in the disasterous Spuyten Duyvil train wreck near New York City on January 13, 1882. Wagner had been on his way from Albany to New York to form a merger of his Wagner Palace Car Company with Pullman, said to involve eleven and one-half million dollars, and Paige's patents were reportedly included in this deal. Paige had used all of his own subsidiary patents in his sleeping cars, including seat backs, lamps, window packing, window latch, beds made out of canvas stretched taut between seats, and car wheels. Much of his interior equipment was purchased from the Springfield firm of Meekins, Packard & Wheat through his friend, "Will" Wheat. Mrs. Paige made the sheets, while his daughter Zelda stencilled them. There were red blankets with buff background, and the name "Paige" was embroidered on them in red letters.

A description of one of his cars, which appeared in the Utica, New York, *Herald* in August, 1881, read as follows:

"A very beautiful car, owned by the Wagner Sleeping Car Company, made under the patents of W. H. Paige, has been put on the New York Central R. R. The special feature is the arrangement by which the usual great weight at the top of the sleeping car is done away with. The usual heavy berths are substituted for by a canvas stretcher. There are 12 sections which accommodate 48 persons. Each section has two large plate glass windows, furnished with rubber strips, to prevent dust and noise. During the day, the apparatus is stored away so ingeniously that no one could tell that he was in a sleeping car, if not so informed.

"Special provision is made to prevent rattling, and the seats for occupancy by day are excellently designed for the comfort of the traveler. Not only is the mechanical design of the car superior to its rivals, but the interior is beautifully furnished in East Lake designs of solid mahogany and oak * * * the car trucks are provided with Paige wrought metal wheels."

Paige had left Wason's in 1879, and with the backing of D. D. Warren of Springfield and Emerson Gaylord of Chicopee, started his own business, the Paige Wrought Metal Wheel Company, at 18-20 Hampden Street, Springfield.

After the tragic death of Senator Wagner, Paige sold his car wheel business to Cleveland, Ohio, interests. Paige, with his family, started for Cleveland in June, 1882, traveling in one of his own sleeping cars, the *Novelette,* named after Allyn Middleton's yacht. When the family found that the house they had leased in Cleveland was not ready upon their arrival, they lived aboard the car parked on a siding for two weeks, getting their meals at the railroad station.

Having offered him an interest in the new enterprise, the people who had bought out Paige's car wheel business, allegedly squeezed him dry of both patents and ideas within a short time and turned him loose. Greatly upset by his unceremonious dismissal, Paige became ill. During part of this (which proved to be his last) illness, the soul-weary man had an obsession that he must go to work. At such times, his daughter would dress him, walk him around the room, and bring him back to bed. Paige passed away in November, 1885, and was brought home to rest in the peaceful White Church Cemetery in West Springfield.

To Paige's skill and ingenuity, Wason's and the travelling public both owed a great deal; and no doubt had he been permitted to live out his allotted span of life,—he died at the age of forty-three,—many other worth-while inventions might have come from his fertile brain.

Paige's patents on file at the United States Patent Office include the following:

#79592, dated July 7, 1868,—Device for connecting dissimilar hose couplings.
83536, " October 27, 1868,—Seat back.
——— " December 27, 1870,—Railroad car seat.
122734, " January 16, 1872,—Lamp for railway car.
141011, " July 22, 1873,—Railroad car wheel.
169005, " November 2, 1875,—Car wheel.
181005, " August 15, 1876,—Sleeping car.

It would not be difficult to visualize a direct line of succession in the use of "disappearing berth" cars, with such promotional concerns as the Monarch and later the American Palace Car companies somehow falling heir to Paige's patents. The writer does not know

that this was so,—but there was at least a definite chronological sequence here. Paige's patents involved canvas stretched taut between the seat backs at two levels to form both upper and lower berths for night occupancy, and which was rolled up between the seats at other times. Between 1886,—which was shortly after Paige's death,—and 1893, there had been a Monarch Palace Car Company, the cars of which had dining, parlor and sleeping facilities, with disappearing bunks that, this time, went into the floor when not in use.* A little later we find the American Palace Car Company, which beginning in the 1890s had operated under various Maine, New Jersey and New York state charters, claiming that it held patents on radical designs which it expected "would revolutionize the palace car business." Here also we find disappearing berths in use on cars that could be used interchangeably for sleeping, dining or parlor car purposes,—evidently not basically different from Monarch equipment, and perhaps built under the same patents. Wason's made at least one elegant car for the American Palace people around the turn of the century. Some of the latter's cars were built for service on the Canadian railways controlled by McKenzie & Mann, and the rights to such equipment and patents may have wound up in Canadian hands. Certainly cars of similar type were known to have been operating on the Canadian Northern around 1910.

At any rate, the American Palace Car Company was never to be merged into the Pullman organization, as virtually all other such companies were, but surrendered its corporate charter to the State of Maine in 1913. Thus the fate of the disappearing berth, as embodied in either Paige's or these companies' designs, is obscure as far as this writer's knowledge is concerned,—although it forms an interesting point of conjecture.

At least one Wason employee of early days who was to achieve fame later in other fields, was Milton Bradley, who came to Springfield in 1856 as a young man, looking for a job. His first position was as a draftsman at the Wason plant. Armed with the sound training and experience which he received there, Bradley opened an office of his own, for making mechanical drawings and aiding in the securing of patents. Bradley did not entirely sever his connection with the Wason Company at that time, however; and one of his best-known accomplishments was the making of the structural drawings and the superintending of the construction of the $10,000 car which Wason had contracted to build for the Khedive of Egypt, and which has frequently been referred to as "The Most Beautiful Car in the World."

It was a lithograph of this car, made by a Hartford, Connecticut, concern, which stimulated Bradley's interest in lithography. He was later to found the Milton Bradley Company, which, now probably the

* A Springfield resident recalls having traveled all through Canada with a special party in a chartered palace car named "Monarch" and which embodied these unique features, in the late 1880s.

world's largest producer of children's games, is still in business in its large plant on Willow Street, Springfield.

To get back to the famous Egyptian car,—no doubt Wason's most publicized job,—it appears that the Khedive of Egypt ordered this elegant affair in the late 1850s for his Royal Train. Some seventy-three feet in length, the car had three compartments, being enclosed at either end and with an open pavilion in the middle. In the wealth of its adornment, it was bizarre to say the least. Built of rare and expensive woods, the car was replete with fancy carvings and luxury accommodations of every description. Among the novel features were two eight-wheel trucks, quite likely the first time that such multiple-wheel trucks were ever used on a railway car. The general color scheme is described as being "mauve on a white background." Above the open center-section was a polished bell metal dome. The interior was elaborately luxurious, featuring among other things artificial flowers worked into the carpet. Foot pressure would crush these flowers, but a spring arrangement opened them up again after the footfalls had passed.

The rolling stock ordered at this time for the Egyptian State Railways included sixty passenger cars of the first and second class, and one hundred freight cars, and was Wason's largest job up to that time,—but the significance of this was somewhat overshadowed by the Khedive's Royal Car itself, quite likely the most highly ornamented of all time, not excepting the famous Papal Train of 1859. At least one of the engraved invitations issued to attend the two-day exhibition of this car in Springfield upon its completion by Wason in 1860, is still extant. It is said that a model of the car can still be seen at the Cairo Museum today. The famous lithograph is in the possession of the Connecticut Valley Historical Society in Springfield, as are some 3,000 mounted photographs representing virtually every car order filled by the Wason shops since 1906, including as well many views of the plant itself.

It is interesting to note that the ever-progressive Wason company is said to have had one of the first telephone lines in the country, it having been installed as a five-party line for the use of company officials George Fisk, Henry S. Hyde, Louis Hyde, Charles Fisk and W. H. Paige. The late Mrs. Zelda Jenks, daughter of Mr. Paige, recalled in more recent years the thrill the family got from listening in on this early telephone to the singing of the operetta *Pinafore* which was was being presented at the Gilmore Theatre in Springfield. Everybody thought this was a marvelous stunt at the time.

It was not long after the Wason works had been transplanted to Brightwood that the old Lyman Street plant was entirely destroyed in the so-called "Taylor Street Fire," the worst conflagration to strike the city of Springfield up to that time. Wason still had interests at the old location, even then, and its loss was estimated at

$7,500.* Springfield's entire one-hundred-sixteen-man fire department fought the $400,000 blaze; flames soared to the skies from a lumber yard and adjoining industrial property which included the old Wason car shops, and a spark-carrying wind scattered blazing firebrands all over the south end of the city. Before the "all out" was sounded, many buildings in the area roughly bounded by Taylor Street, Water Street (now Columbus Avenue), Vernon and Dwight streets had been laid waste.

As noted elsewhere, Mr. Fisk's opposition to saloons and pool-rooms was most pronounced. He considered these to be a distinct menace to Brightwood residents in general, and to his employees in particular. It is interesting to observe that Mr. Fisk's wishes in this respect were given such consideration at City Hall that for years there were no pool-rooms permitted in the vicinity of the Wason plant, nor were there any saloons north of an establishment at Main and Congress streets,—fully two miles away!

Wason influence was also noted in the locating of the first Brightwood Branch Post Office, which for years was to be situated on Wason Avenue, directly across the street from the company's office building.

Among its several major claims to distinction, the Wason plant generally, and several of its employees specifically, had considerable to do with the development of the sleeping car in America. Although the first so-called "sleeping car" to be put in service on this continent (and perhaps in the world) was operated on the Cumberland Valley Railroad,—now part of the Pennsylvania system,—in the winter of 1836-37, it was a crude affair, being merely a remodelled day coach with twelve bunks but no bedding. A stove furnished its heat, and candles provided illumination. Everything was hard, rough, strictly utilitarian. As early as 1843 the Erie Railroad, then known as the New York & Erie, had two cars especially designed for night travel, although they could hardly be called sleeping cars in the present-day sense of the term. These "Diamond Cars", so-called because the frames were diagonally trussed, making the space for the windows diamond-shaped, were designed by John Stephenson, one of the country's earliest car builders, and were constructed in his New York City shops. The seats were built so that each pair were facing; in order to form a platform, or bed, the seat cushions were pushed together and the backs lowered horizontally. Head- and foot-boards were formed by partitions between the seat backs. Six such beds could be arranged on each side of the car, which had an over-all width of eleven feet. Although the railroad itself at that

* The alarm for this fire which occurred on May 30, 1875, was sounded by William H. Paige, a Wason employee referred to elsewhere in this record,—and his alertness is credited with saving the city from an even more disastrous conflagration. According to a biographical sketch written within recent years by his daughter, Paige discovered the fire in a planing-mill next door to the old Wason shop, and ran all the way to Main Street to reach a fire box. According to the daughter's story, Paige came home that night after the fire,—"black as a negro, and handed mother a big brass key, saying 'there Laurie, is all that Johnny and I have left.'" The "Johnny" here referred to was John J. Moore, Wason paymaster.

time offered only a three hours' journey, the "Diamond Cars" were designed to be slept in, and were used for that purpose.

When the cars were delivered at the New York & Erie shops at Piermont, New York, they were named the *Erie* and *Ontario*. Their weight and size, however, soon proved too great for practical use on the railroad at that time, and they were taken out of service.

The first bona fide sleeping cars as we know them today, were not constructed until some years later. Claims have been made that Wason built the very first of these in their Springfield plant. However this is a highly controversial claim, and most difficult to either prove or disprove at this time. At any rate, Wason is known to have built at least one such car several years before the Civil War. George C. Fisk, Wason's president for many years, once said in an interview that T. T. Woodruff of Alton, Illinois, who is sometimes credited with "inventing" the sleeping car,* came into Fisk's office one day with his model, upon which he had secured a patent, done up in a bandanna handkerchief. Wason built a car for him with twenty-eight seats which could be thrown into couches, at a cost of $4,000. This was in 1857. The car was operated experimentally on a number of railroads in the Mid-West for some years. Contracts were effected between Woodruff and various railroad companies for the operation of sleeping cars under Woodruff's patents. These were later (1870) assigned to the Pullman Palace Car Company. Woodruff is said to have made $200,000 out of his sleeping car patents, but eventually lost all his profits through the processing of various suits involving alleged infringements on other patents. The Woodruff Sleeping Car Company, along with the Mann Boudoir Car Company,† was merged with the Pullman Palace Car Company in 1889, by which time, or very soon thereafter, interests closely identified with Pullman virtually controlled the sleeping car field in America.

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*According to patent office records, Woodruff was the third to receive a patent for a sleeping car in this country. The first had been issued to Henry B. Meyer, September 19, 1854.

† It is interesting to note that the Pullman Company has been carrying within its corporate structure for many years back, the company which originally experimented with "room cars" in America, but which had to take the idea abroad in order to achieve some measure of success,—this being the Mann Boudoir Car Company, which Pullman bought out in 1889.

This concern had been formed by Col. W. D. Mann, whose cars were the first to use separate compartments opening from a side corridor. Patent rights to Mann's sleeping car, although of American origin, were acquired by the Compagnie Internationale des Wagon-Lits, which had been started in France by M. Georges Nagelmackers in 1876. Contracts with principal European railways were concluded between 1883 and 1896, and the company put on a firm basis. This period saw the inauguration of the Orient Express and other famous Continental trains, and by 1898 complete sleeping car service, including restaurant cars, was in operation throughout Europe, with a trans-Siberian service from Moscow to Irkutsk that was finally extended through to Vladivostok.

Originally introduced in Europe in 1873, the Mann cars were not given a trial on American railways until ten years later. Just what might have been the history of sleeping car accommodations in this country had Col. Mann's company survived as a corporate entity, no one knows; but the Pullman Company, which claimed that Mann's room cars were not successful here because Americans preferred the lower rates made possible by the use of open berths on an aisle, has certainly had to reappraise its estimate of the popularity of room cars within recent years.

Besides Woodruff's contribution to the development of the sleeping car, we should note here that broad claims have been made for others, including Asa Hapgood, who worked with Wason at one time and who built, and owned and operated, up until his death in 1868, the line of sleeping cars used between Boston and New York over the so-called "Springfield Line". After Hapgood's death, these cars were sold to the railroads over which they had operated in this service. Claims have been made that the Wagner and Pullman sleeping cars were copied directly from Hapgood's cars. Some claim he "invented" the upper berth,—however, it is difficult to prove, since he never took out any patents on his cars. According to the Hapgood family genealogy, published in 1898, the original car model was acquired by the Wagner Palace Car Company, and as of the date of publication of the genealogy, was "still on their premises in New York."

It may be of interest to trace a little of Hapgood's background. He was born in Barre, Massachusetts, in 1813, and was clerk in the Quincy House in Boston, early in life. He later went into the mattress and pillow business with an establishment on Fulton Street, New York, which may have given him his background experience for later work in the sleeping car field. According to the genealogy, Hapgood invented a ventilator for railway cars, which was to be extensively used in the United States, then "invented some sleeping cars for a railroad in Canada, and personally directed their construction."* He later "invented a different model," according to the genealogy, which was put on the "Springfield line" and Hapgood became sleeping car conductor on the route.

Hapgood, at one time or another, worked for both Webster Wagner and the Wason Company, it seems, and his influence upon the sleeping car designs of Henry Paige (whom we have already considered) and others who figured in Wason's participation in sleeping car development, may have been far greater than is generally believed.

George Fisk, in an interview some years ago, indicated his belief that Wason built the first newly constructed car with which George Pullman (the "father" of the Pullman sleeper), had anything to do. Fisk credited Pullman with the creation of the swinging upper berth, which was to become an integral feature of the standard sleeper used in America. The car that Wason built for Field & Pullman in 1863,—two years before Pullman built his famous "Pioneer",—was named "Springfield", appropriately enough. Wason built more sleeping cars later on, including equipment for the American Palace Car Company and other independent lines. Before the turn of the century,

* Possibly the first really "new" sleeping car with bunks was designed and built at Brantford, Ontario, Canada, in 1860, especially for the use of the then Prince of Wales (later King Edward VII) on his visit to Canada. Earlier cars would appear to have been merely "couch cars". This Canadian car, which was possibly Hapgood's, attracted many people to see it, including George M. Pullman himself. Pullman examined the car carefully, we are told, and shortly applied for patents on the basis of what he saw here.

Wason was turning out such elegant jobs as the $50,000 palace car "Boston", which was equipped with berths that could be sunk beneath the car floor during daytime use.* Several pictures of this unique luxury car are to be found in Wason trade catalogs, around 1900.

Although no claim is made that Wason originated the drawing room car, as such, the assertion has been made on behalf of this company that they were the second to build this type of deluxe passenger car in this country. The first was no doubt the Old Colony Railroad, which put into service on its road two coaches built at its own South Boston shops after the English plan, with two compartments and doors on the side, to reach which the conductor had to climb precariously along the car with the help of a hand rail on a narrow platform. According to the Springfield *Republican* of August 4, 1873, the Wason Co. had built the next two, after the same pattern, for the New York & Boston express line, but they were found impractical for American railroading, and they were discarded. Wason then constructed what is claimed to have been the first drawing-room compartment car after the presently-accepted basic design.

Much of the passenger and freight car equipment going into service on the fast-building railroads of America's Pacific slope during the latter part of the nineteenth century was to bear the Wason label. Among the larger contracts were those for seventy-two passenger cars and the iron work for 2,600 freight cars for the Central Pacific Railroad of California. One of the largest single orders for passenger cars during this period was one for sixty-two coaches for the Canada Southern Railway.

As business increased, a boost in the company's capitalization was again in order in 1881, when it was raised to $300,000, which was to be its all-time high.

Cars built for the export trade made up more and more of Wason's business as the years went by. This trade was estimated at fifty per cent of the firm's total, at one time. Many of these cars went to Mexico, Cuba, Brazil, and the Argentine; others to China and elsewhere in the Far East. Some went to railways in Canada and other British possessions, although relatively speaking, the British market was not as actively developed as some other foreign accounts.

Many of the cars that Wason built for export were designed so that they could be easily "knocked down" or disassembled for shipment by steamer. The roofs and ends could be readily removed, and the sides taken off in sections.

In deference to the large volume of business that originated in Latin American countries, Wason trade catalogs for years were printed with text in both English and Spanish,—some were even in four languages.

In addition to steam railroad cars, Wason built some of the first horsecars to be used on the street railways of New England. They

* The "Boston" was built for the American Palace Car Company, and had sleeping accommodations for twenty passengers.

built some of the first such equipment used on the streets of Boston as early as 1857. Wason also filled the first car order for the Hartford & Wethersfield Horse Railroad in Connecticut, which began operation in April, 1863. These first Hartford horsecars had red paneling, and red birds were painted on the sides, emblematic of the famous old Red Bird Stage Line which it replaced.

Wason apparently later also built some of the tiny one-horse cars once familiar on the streets of Hartford. It is recalled that when the last of these relics was destroyed in East Hartford about 1915, a crew of men came all the way down from Springfield and appropriated the running gear from the antiquated little car which had been spending its last days reposing in somebody's yard.

Although the Wason plant had never gone too extensively into the horsecar field, the construction and repair of electric streetcars was added to the company's line by the very early '90s, as the trolleys came into more general use. Thousands of them were to be outshopped here during the next forty years.*

It is believed that one of the first,—if not the first,—job of this type that Wason took on was in 1890 or 1891, when several of the newly-electrified Springfield Street Railway's old single-truck horsecars were sent to Wason to be spliced into double-truckers and equipped for electric operation. As rebuilt, these were to be the first double truck electric cars ever used in Springfield. By the mid nineties, Wason was taking on more and more electric car work, and many new employees were being attracted from such industries as the Bemis Car Box Company, which had been building horse- and cable-car parts in Springfield for years, and was now working into the new electric car-truck field. However Wason's expanding program looked most attractive to many Bemis employees, and quite a few well-qualified hands were being recruited from there in the '90s.

Towards the latter part of the nineteenth century, a concern known as the Robinson Radial Truck Company began making a novel type of electric car-truck in the building on the south side of Wason Avenue which is best known to old-timers as the "Montreal Shop", it having been in more recent years, Wason's own truck shop.

The Robinson Radial was a six-wheel electric car-truck which had one set of wheels under the center of the car. It had been designed by William Robinson of Boston, and was first used on Jones- and Newburyport-built cars for the West End Street Railway of Boston and the Union Railroad of Providence, Rhode Island. The venture was only briefly successful, however, and the company soon went out of business.† Robinson was founder of the Union Electric

* Like the old English iron masters, New England's car building firms, as well as contractors, frequently took their pay in railroad securities. In this way, Wason, among others, greatly helped in the financing of many early enterprises to which they either supplied or hoped to supply, services or equipment.

† Cars using the Robinson Radial Truck were also operated in Lynn, Mass., Dover, N. H., Brooklyn, N. Y., and possibly other Eastern cities during their brief popularity in the 1890's, which ended with the general introduction of eight wheel (double-truck) cars.

Signal Company, which was later acquired by Westinghouse, and now, as the Union Switch & Signal Company, is a leader in the railway switch, signal equipment and supply trade.

Wason built several odd and rather revolutionary experimental jobs around the turn of the century. In 1897 it produced the unique fire-engine car, a two-unit affair which had been developed by engineers of the Springfield Fire Department. Designed for the quick loading and unloading of horse-drawn fire-engines, the car had to be pulled to the scene of the fire by an electric trolley. The car was not an unqualified success, perhaps because fires had a disconcerting habit of breaking out some distance from the nearest trolley line. However, it saw use at a few major fires during the dozen or so years that it was in active service. The car was finally sold for scrap by the Springfield Fire Department in 1914. The small building in which it was housed stood behind the Hooker Street Fire Station until early in 1946, when it was damaged by fire, and was torn down shortly thereafter.

In 1902 Wason built the palatial $20,000 parlor car "Berkshire Hills" for the Berkshire Street Railway, and no car ever rode the trolley rails that could match it in elegance. (Further reference to this car will be found in the chapter on street railways.)

In 1905 the Fifth Avenue Coach Company of New York City began operation of the first fleet of auto buses to be used in common-carrier service in America. As usual, Wason had a hand in the building of the Fifth Avenue's early buses,—never realizing, in all probability, that this type of vehicle would one day play an important role in putting such firms as Wason's out of action; for, back in that year, the company, as New England's largest car builder, was doing a $1,500,000 annual business, and when running at full capacity, was giving work to seven hundred men.

In 1906, which was to be the last year of independent management at Wason's, its chief officers were as follows:

President,—George C. Fisk
Treasurer,—Henry S. Hyde
Secretary,—Louis C. Hyde
Vice President and General Manager,—Henry Pearson
Purchasing Agent,—Herbert Sanderson

Early in that year, James Rawle had been elected president of the J. G. Brill Company of Philadelphia, reorganized with a $10,000,000 capitalization following the death of G. M. Brill, who had been the active head of this great car building firm since 1888, as successor to his father. Sensing the advantages of better deliveries and reduced freight rates in an increasingly competitive market, the Brill company was turning its attention towards the acquisition of other car building plants in various parts of the country.

The End of Wason Home-Ownership

Among important changes now to take place was the J. G. Brill Company's acquisition of control of the Wason Manufacturing Company, which was to be fully consummated in August, 1907.

In connection with this merger, Mr. Fisk retired from the business, and Mr. Pearson took his place as Wason president.

After its acquisition by Brill, car building activities at Wason's continued along the same general lines as before. As a matter of fact, among Springfield people, it was never to be known as anything but "Wason's", for as long as car building was conducted here.

However, from this point on, Brill men were in the background of its management, and after Mr. Pearson relinquished the Wason presidency in 1910, were to guide its administrative policies to an increasing degree. Brill's Samuel M. Curwen was at this time appointed Wason president, with Austin H. Pease secretary and Henry S. Hyde continuing as treasurer here,—both of the latter being resident officers.*

Wason added some new lines at about this time, such as the gas-electric car, reflecting the influence of the new Brill background.

Commencing in 1900 with the Strang Gas Electric car, Brill had been closely identified with the development of gas-electric cars of various types, including the General Electric, McKean and Hall-Scott cars. With Wason coming under Brill control, we find the latter plant turning out much new equipment of this type. These cars, like the successful gas-electric cars of today, operated by converting engine power into electric power by means of a direct-connected generator, and the transmitting of this power to motors geared to the axles. Most of those early cars failed to give full satisfaction, chiefly due to the inadequacy of the gas engines then in use. But plenty of them were coming off the Wason transfer table, around thirty-five years ago. They ran up many, many miles in experimental service, and in more recent years, with the "bugs" ironed out, this type of equipment has come into renewed, and more successful use on the nation's railroads.

It is interesting to note that under Brill control, Wason continued its previous practice of printing the text of its trade catalogs in both English and Spanish, in deference to the plant's heavy export trade with Latin American countries.

With the expanding of New England's network of interurban trolley lines, it became possible for Wason to ship out many new electric cars over the Springfield Street Railway and connections,—often through to final destination, under their own power. Where this was not possible, the cars were securely blocked on railroad flat-cars, and shipped out over the Boston & Maine Railroad, from which sidings led onto company property. Mr. Edward Richards, an old

* About 1917, Mr. Hyde's long time position as Wason treasurer was assumed by E. P. Rawle, of the Brill organization. Mr. Pease became Assistant Treasurer of Wason's, as well as its Secretary.

"Bemis Car Box" employee, in later years superintendent of Wason's truck shop, and finally their chief engineer, recently recalled that on occasion when no Boston & Maine trains were in sight, new street-cars would be trundled over the multiple-track railroad grade crossing to the end of the Springfield Street Railway's car track on the easterly portion of Wason Avenue, from whence they could proceed under their own power to destination. In later years, there was a direct street railway connection to the plant, after the Springfield Street Railway built its Plainfield Street car line, around 1897.

Wason had built the first four hundred cars for the Manhattan Elevated Railway, after that company changed over from steam to electric operation. At one time, Wason was shipping out ten of these new cars a week to New York over the railroad, coupled together in a solid train behind a New York, New Haven & Hartford locomotive.

Later Wason also built rapid transit cars for other electric roads.* To take care of lubrication and watch out for hot boxes, etc., the company supplied custodians, or "messengers" as they were called, to accompany such shipments as were equipped with standard MCB couplers and air-brakes, and which could go out to destination on their own wheels. Some of these, such as the cars built for Oakland, Antioch & Eastern road in California, took their guardians for a good long ride, and they would often be gone for several weeks at a time on such trips.

The building and assembly of car trucks was long an important feature of Wason operations. Here again Wason quality showed itself in the ruggedness of the product. It is very likely that Wason workmen hand-forged the equalizers and all truck parts except the springs, which were standard stock items and doubtless procured elsewhere.

If Wason introduced anything radically new in the truck line however, it was in the field of electric car design. Having earlier used Baldwin and Bemis-built trucks on much of its street railway equipment (the Bemis No. 6 was a very popular type), Wason was beginning to develop its own trolley car truck designs by the late '90s when its own truck shop was activated. In addition to the so-called Standard O-36 and O-45 (for maximum traction use), and Standard O-50 and O-60 trucks for larger cars built here, Wason's own No. 20, 21, 25, 30, 40 and 41 trucks became increasingly popular for street railway use.

In later years, after the merger, Brill's standard truck designs were used on Wason built cars, including the popular Brill 177E for light-weight equipment, and which, with minor variations, was used on virtually all of the electric cars outshopped by Wason in its last decade or so of active manufacture.

At Wason's they had an odd building nomenclature, founded on both fact and whimsy.

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* Boston's original group of elevated cars came from the Wason shops, in the period between 1899 and 1901, being among the first rapid-transit cars to use multiple-unit control.

Hardly anybody ever referred to the truck shop as such,—it was always "The Montreal Shop", presumably so named because of the large number of French-Canadians who labored there. Another building was known as "Holyoke", because so many Holyokers worked in it; and one of the sheds where they assembled snowplows went by the name of "Canada", for only slightly-less-obvious reasons.

For over thirty years, Wason had a cabinet-maker, Daniel M. Davis, who although very deaf, was one of the company's best workers. He tried various devices to aid his hearing, including an apparatus he devised to press against his teeth to absorb sound vibrations. Around 1906 or 1907, he went to New York and secured one of the first commercial hearing aids ever used around here, and which had four discs, and looked very much like a camera.

Mr. Davis, during his service at Wason's invented a device to make rosettes for fancy car ornamentation. Although he declined to patent his invention, he always took it apart when he was through using it at the shop.

His handiwork appeared in some of Wason's fanciest cars. Mr. Davis retired in 1908, and passed away some years ago. His daughter, Miss Edith M. Davis, has a small wooden sewing box, the nine and one-quarter inch by six inch top of which is made up of three hundred ninety-six separate pieces of inlaid woods, beautifully fashioned by her late father, and a striking example of cabinet-maker's artistry.

Several important units of the Wason plant were destroyed in a $75,000 fire in 1912, in which a lumber shed, one of the smaller woodworking shops and valuable records of the purchasing agent were lost, along with several million feet of lumber, and several street railway plows. It was the third and last large fire in the company's history. Chief Daggett of the Springfield Fire Department ordered the plant's sprinkler heads broken off, after which the firemen fought the fire working deep in the water, caused by the open sprinklers. It was noted that there was only one steam fire engine in attendance here, at what was perhaps the last major fire in Springfield before complete motorization of the fire department was effected.

During the first World War, the Wason plant's facilities were re-geared to aircraft construction for the Federal government. All railway car building was suspended while 2,000 workers labored around the clock in three shifts, building two-seater training planes, with Ford Liberty motors. While the war was on, many women workers were employed at the plant, which was kept under surveillance by military guards. During this time a sign reading: "Springfield Aircraft Corporation" replaced the long-familiar Wason name on the office signboard. The above corporation had been organized as a joint wartime enterprise by J. G. Brill Company and the J. G. White Management Corporation, of New York City,—Brill furnishing the Wason plant and equipment and White putting up the money for working capital.

The Wason plant, under the stimulus of wartime urgency, was now doing a business of between $3,000,000 and $3,500,000 a year according to reports.

After the war, car building was resumed again at Wason's. Equipment for electric street railways was now making up a major proportion of the company's business, with some hundreds of newly-designed, single-truck lightweight "Birney" cars being turned out in the immediate post war years. Later, double-truck lightweight cars of varying design but embodying essentially the same safety and power-saving features, were turned out, bearing the familiar Wason name plate.

Reference should be made to a valued Wason employee who practically "ran the shop" for many years,—C. F. Rice, who was superintendent until the early 1920s, and who but recently passed away.

By this time, unsettled political conditions in South America, as well as after-effects of the first World War elsewhere abroad, had considerably restricted Wason's foreign market. However, this might be as good a place as any to make a partial list of what had been good customers outside this continent, ever since 1906, as shown by a one-time Wason official's notebook covering car orders during this later period:

Argentine (F. C. C. N.)
Carr Brothers (plantation railway equipment, for foreign use)
Ferrocarril Del Pacifico
Ferrocarril Dominico
Ferrocarril de Colombia
Havana Central Ry.
Imperial Railway of China
Kwang Tung Yult Han Railway (China)
Mexican Southern
J. N. Motley (Peru)
United Fruit Company (foreign plantation service)
W. R. Grace & Co.
U. M. C. Co. (Wonham & Magor)
Various railways of Bolivia, Costa Rica and Guatemala

On November 27, 1923, Vice President Henry Pearson passed away suddenly as a result of a heart attack, while at his office desk. He was then seventy-one years of age, forty-two years of which he had spent in Wason employ, starting as assistant machine shop foreman in 1881, and climbing the ladder gradually towards the presidency, which office he assumed in 1907, after the J. G. Brill Co. had acquired control of the plant.

In April, 1910, Mr. Pearson had resigned from the presidency of Wason's, but returned later in the same year in response to insistent Brill urging, to become consulting engineer,—which position he filled until February, 1919, when he again accepted an executive post with the firm, being elected Wason vice president, and remained such until the time of his death.

Veteran employees remember English-born Henry Pearson as a sterling executive, who did much to make Wason the industrial power that it was. It is recalled that when he went to New York, the employees would be on the alert to see what type of head-dress he would be wearing upon his return. For, according to his established custom, if he had landed a big order, he would be sporting a plug hat when he got back to the plant.

Upon his death, the board of directors passed a resolution in tribute to Mr. Pearson's ability and character, which was reproduced, with his photograph and a biographical sketch, in the *Brill Magazine* for January, 1924.

Effective as of January, 1924, the following changes were made as a result of Mr. Pearson's death:

Austin H. Pease, former secretary, was made vice president to succeed Mr. Pearson; Charles F. Johnson was made general manager; Walter Abrahams became secretary and R. T. Foster, superintendent.

Upon the death of Mr. Pease, then ranking resident company officer, on October 21, 1924, Mr. Johnson was made vice president and general manager and Mr. Abrahams, assistant treasurer.

In 1927 a new type of electric car was developed by local transportation officials including W. L. Harwood, engineer of power and equipment of the Springfield Street Railway.

The car embodied many characteristics of modern motor bus design, including foot control, bucket seats, sloping plate-glass windshield front, a skirt concealing part of the car trucks and various noise-reducing features.

Instead of having half the motor weight upsprung on the axle, according to conventional practice, the entire weight of the motors was supported on the truck frame with rubber cushioning blocks. Connection to the underslung worm-drive axles was accomplished through propellor shafts and in conjunction with a differential to eliminate wheel slippage at curves, thus tending towards quieter operation. Duralumin was used wherever possible in both the underframe and superstructures, reducing the car's weight considerably.

A great deal was hoped for this car, but it had certain drawbacks, among other things being found unsuitable on the hills. As the Springfield Street Railway had few trolley lines without appreciable gradients, the car was relegated to service on the practically gradeless West Springfield line, after having been tried out experimentally on other routes on the Springfield system.

The car was named "Miss Springfield", with a design in the center of each side panel showing the Springfield Municipal Group buildings inside a small circle. It had four Westinghouse V91B motors, Wason 52 trucks and XM19 control. It was taken out of service with the motorization of the West Springfield trolley line in November, 1936, and lay idle at Hooker Street yard until 1940, when it was finally scrapped.

Although not an unqualified success in itself, the car embodied some new features and principles of design later to be used in the

new streamlined "PCC" street cars a few years later. Wason closed its doors before any of these later cars came to be built, but it is safe to say that the worm-drive car it built for the Springfield Street Railway in 1927, in many ways set the stage for the successful development elsewhere of the PCC trolley car in later years.

In developing the first all-steel highway diners in the late '20s, the Wason management was following a precedent in this type of venture which had previously been established right in Springfield many years before.

Well over fifty years ago, it was a Springfield man by the name of Samuel Jones who was pioneer proponent of the so-called lunch-car of the "Owl" variety, which was operated at night when regular lunch-rooms and restaurants were closed. These cars were horse-drawn, and were brought out in the evening, and taken away in the morning. From such modest beginning, came the twenty-four-hour lunch-car, with the vehicles ultimately resting on permanent foundations, and equipped with electric light, gas stoves and running water. For Wason is claimed the distinction of building the first all-steel-frame highway diners in America. It started building these about 1928, and for a period of about three years, many sturdily built diner units were constructed here, in accordance with Wason's traditional high standards. Their exterior metal surfaces were lacquered, and interior ceilings were of vitreo-enamel sheets. They had mahogany trim, tile floors, vestibules and capacity for thirty-six customers at a time.

These cars featured in the catalogs as "Brill Diners", were sold and moved to the location of the buyer's choice, fully equipped, even to such details as menu frames and removable letters for them. There was even an arrangement so that payments could be made out of profits.

Since these cars could be moved as desired, the owner was thus able to take both his building and the improvements thereon, with him from place to place. Many of these rugged Wason diners on semi-permanent foundations can still be seen in use in various parts of the country.

Wason built a few bus and trolley-bus bodies in the 1920s, but never went extensively into this line.

One of its novel items of bus construction was a bus with a smoking compartment, which was built for the Hartford & Springfield Street Railway in the mid 1920s, carrying on a design which this company had previously used in its trolley cars. It is doubtful if a motor bus incorporating a separate smoking compartment had ever been built elsewhere up to that time,—or possibly even since.

An Industry in Decline

About the last major car building job undertaken at Wason's was that involving fifty new lightweight double-truck streetcars for the Springfield Street Railway. This order was completed in 1928.

Shortly afterwards, following the 1929 market "crash", came the business depression, and a rapidly declining market for street railway cars of all types.

About 1930, the old "Montreal Shop" which had been sold by Wason some years before and had passed through various hands, was torn down by the Moore Drop Forging Company, who had been using it for four or five years, but now wanted to replace it with the fine modern building which stands here today, as its Plant No. 3.

In order to keep pace with the constantly changing trends in consumer demand, Wason's turned its hand to many new types of construction in these later years.

The plant still had twenty-seven departments in 1930, at which time according to a contemporary survey, they were putting out, not only railway cars and highway diners but automotive bodies, airplane parts and even motor boats!

Another item which Wason was building, about this time, in adapting its facilities to current trends, was a miniature golf course, various layouts of which the company built during the miniature golf craze which swept the country in the late 1920s.

The Wason "V"-hull motor boat was built of African mahogany, with nickel-silver trim. Towards the end, both inboard and outboard boats were being turned out complete except for motors,—Johnson "Sea Horses" being generally used for the power unit. A few fine cabin cruisers were also built at about this time, including one for Judge Davis of Springfield.

In order to meet a growing demand for motor buses, the Brill Corporation had been formed in 1926. This company had control of the American Car and Foundry Motors Company, which owned the Hall-Scott Engine Company, builders of motor bus engines. The American Car and Foundry Motors Company also owned the Fageol Motors Company, another bus manufacturing concern.

In this major corporate fusion of interests, William H. Woodin, president of American Car and Foundry, was made chairman of the board of directors of the new corporation, while Samuel M. Curwen, who had been president of the Brill Company since the death of James Rawle in 1912, held the same position in the new organization.

In 1931, and as a result of these changes, Wason's one-time individuality was somewhat further submerged by a change of name, when it officially became the J. G. Brill Company of Massachusetts. This involved no corporate change, but was brought about to keep in line with efforts of the new Brill management to "emphasize the Brill name" among the several remaining car building subsidiaries of the parent Philadelphia organization, which were at that time located at Springfield, St. Louis, Danville, Illinois, and elsewhere.

The Wason Manufacturing Company's last letterhead, overprinted with the words "J. G. Brill Co. of Massachusetts" showed the plant's final active officers as follows: Samuel M. Curwen, president, E. P. Rawle, treasurer (both Brill men, of Philadelphia); and Walter Abrahams, secretary and assistant treasurer; Charles F.

Johnson, vice president, and general manager, and R. T. Foster, superintendent, as resident officials.

In January, 1932, Wason's took care of what must have been its final "trolley job", when a couple of second-hand electric cars which the Fitchburg & Leominster Street Railway had just sold to the Bristol (Connecticut) Traction Company, stopped off at Wason's where they had been originally built, for a little painting and refurbishing en route,—then were loaded on flat cars and sent on their way,—believed to have been the last of many hundreds of cars that through the years had left Wason's in this manner.

About the very last type of construction job to be laid out at Wason's before it closed, was a portable gasoline filling station, called the "Stationette". The Standard Oil Company, among others, became a market for these rather novel units. Thus Wason, ironically enough, was to end its days by catering to the needs of the automotive industry which had had so much to do with putting it out of business.

The plant itself was officially closed in April, 1932, although many of its activities had already ceased, and its personnel had been drastically cut since about the last of August, 1931.

Following the official closing, only a skeleton office and maintenance staff remained on duty. Subsequently, much of the plant's 225,000 square feet of floor space was leased to various concerns for storage purposes, including the A&P Stores, American Bosch Corporation and the Moore Drop Forging Company.

Although at the time of the November, 1927, flood, the high water barely reached to the transfer table out in the yard, much damage was done to the plant's idle but still-valuable machinery at the time of the much more disastrous flood which ravaged the Connecticut Valley lowlands in March, 1936. At that time, there were no flood-protection dikes in the Springfield area, and Connecticut River flood waters which at one time reached the 28.7 foot stage, covered the plant area to a depth of seven feet. There was even three or four feet of water in the main office, which was on slightly higher ground. Repairs were made however, and inspection and maintenance of equipment and machinery was continued, pending decision as to its disposition.

There had been little change in this situation by the time of the 1938 hurricane and flood which swept this area. Although high water in the Connecticut River reached almost to the 1936 peak, new dikes now protected the Brightwood area, including the Wason property, and what damage was done here at this time was caused by the high winds.

The sale at public auction on January 28, 1941, of woodworking machinery and tools, on the premises of the old Wason plant, was largely attended, for war was again ravaging Europe and threatening America,—tools and machines were in great demand throughout the nation as defense plants, large and small, worked at top speed. This sale marked the final phase of de-activation of the plant which had

been building railroad cars and allied products at this or some other location for the better part of a century.

Through a major corporate merger that took place in August, 1944, when the American Car and Foundry Company bought into the J. G. Brill organization, the name of the famous old Philadelphia car building firm was changed to ACF-Brill Motors.* It was doubtless in connection with policy decisions resulting from this merger that the long-idle Wason property in Springfield had been finally offered for sale, being purchased by the Moore Drop Forging Company in December, 1944.

In the old Wason office, records had been kept current and intact, in the capable hands of Mr. Walter Abrahams, at one time Wason chief accountant, and since 1931, secretary and assistant treasurer of the J. G. Brill Company of Massachusetts. Mr. Abrahams and the late Charles S. Paige, plant watchman,† were the only remaining Brill employees on the premises when the office itself was finally vacated late in February, 1945; and such items as the old Wason Manufacturing Company minute book, covering the entire period from February, 1862, to August, 1907, the well-known Wason scrapbook, and other more current records of value were packed and shipped off to Philadelphia for preservation.

Of the half-dozen buildings which Moore acquired with the fifteen acres of one-time Wason property, several, including the former office structure, had either been razed or were in process of demolition by late 1945. It appears that they had quite a time in getting the sturdy old office building down, largely because of the three brick vaults which had been built right into the west side of the structure, which was still replete with its expensive mahogany and black walnut fixtures.

The magnificent old office wall clock, perhaps three-quarters of a century old, has fortunately been preserved in its beautiful walnut case, and with other items is in the possession of Mr. Abrahams, who is now engaged in private accounting practice in the Whitmey Building in Springfield; and several of the strikingly beautiful Wason office mirrors have also survived, and remain as highly cherished possessions in private hands today.

A new wooden office building now stands on part of the site of the old office, and is occupied by the Moore Drop Forging Company, along with the several former Wason shop buildings which have been

* The Brill plant in Philadelphia built its last trolley cars in 1941,—an order for the Philadelphia Suburban Railway. Since that time the firm had concentrated on bus manufacture. After the consolidation with ACF was effected in 1944, still another change has taken place in this organization, of which Wason's once formed a part. On January first, 1946, it was announced that a controlling interest in the Brill concern had been purchased by Consolidated-Vultee Aircraft. This represented what is believed to have been the first entry of a major aircraft manufacturer into the field of surface transportation.

† "Charlie" Paige had been employed at Wason's for half a century, having come from the Bemis Car Box Company as did so many others in the '90s. He was the son of Frank Paige who ran the transfer table, and nephew of Henry Paige, inventor and long-time Wason superintendent.

saved from destruction, and now comprise Moore's Plant No. 4. These include the old paint shop, with its roof and sides still partially buttressed by most of the original eight-by-twelve trussed timbers of solid pine, that, extending the full seventy-five-foot width of the building and spaced fifteen feet apart, were put in here when the structure was built by Wason, a little over three-quarters of a century ago. It has been a subject of some speculation on the part of the present occupants as to how these seventy-five-foot timbers were brought to Springfield at that time. The most plausible theory seems to be that they were floated down the Connecticut River from Vermont or New Hampshire, a not uncommon practice of those days.

Many of the shorter original wooden nine-by-twelve uprights are still in place too, throughout the building. Actually, the ancient structure has only been moderately altered in its general appearance, by its new owners, for whose uses it is humming with production again as of old.

Both the old Wason foundry and machine shop are also currently in use, although only for storage purposes. The other one-time Wason structures have all been dismantled by their present owners. However, the tall brick stack of the power plant is still intact, and is now being used as an incinerator. The power house itself is gone.

The venerable European-made rails of the transfer table out in the yard, were taken up not long ago, although most of the tracks inside the former paint shop are still there today.

Thus, as the ancient walls of the Wason car shops echo to the hammers of a new industry, at least these rails remain to bear silent tribute to the thousands of shiny new cars that once passed over them in years gone by, destined to spread the name of Wason, of Springfield, Massachusetts, to the far corners of the globe.

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Following is a brief outline of several Springfield industries which fall into natural association, historically speaking, with the Wason Car Works, and which have been briefly mentioned in the text.

Bemis Car Box Company

Organized back in 1882, and incorporated in 1885, the Bemis Car Box Company had its early plant at 30 Taylor Street, Springfield. One of its featured products was S. A. Bemis' patent journal box, first used on horsecars, later on electrics. It was designed to reduce friction, and permit the utilization of all, or nearly all, of the power applied to street railway cars. The company also made Bemis-patent grip trucks for single and double-truck cable-cars. In its popular truck for the early electric cars, the frame was cast, rather than "hogged out" of bar stock, as were many other types of streetcar trucks of that period.

Back in horsecar days, the running gear under the cars was of light construction, and with the adoption of electric propulsion, it was considered logical that the motors should be mounted on the car body, and the rotative energy transmitted to the wheels by mechanical means. Experiments, however, demonstrated the fact that it was impractical to build the car body strong enough to support the motor equipment, and that trucks would have to be developed independently of the car body, and motors mounted thereon. The first such trucks were successfully introduced about 1888, from which many types were subsequently developed, each best adapted for its particular class of service. Bemis for years had one of the best and most popular lines of such trucks, and they were widely used by streetcar builders all over the country.

Having successively occupied quarters at 119 Liberty Street, and two locations on Birnie Avenue, this concern, in recent years known as the Bemis Car Truck Company, has a plant at 369 Birnie Avenue. It has long since retired from the car-truck building field, however, and now specializes in case-hardened, heat-treated bolts, bushings, etc., for the regular railway supply trade.

Their one-time Liberty Street quarters, where hundreds of high quality car-trucks were turned out over a period of many years, making use of castings supplied by the Springfield Foundry, then located next door, has but recently been torn down.

Springfield Car & Engine Company

In 1848, Osgood Bradley, Amasa Stone and Azariah Boody incorporated the Springfield Car & Engine Company for the purpose of manufacturing cars, locomotives and other machinery incidental to the equipment of steam railroads. Previous to its incorporation, some of the persons interested in the enterprise had begun the manufacture of cars for the railroads, but the business was conducted on a very small scale.

Hopes that this new company could undertake operations on a much more extensive basis, were not to be realized, however, although it did build a few locomotives, including the first one used on the Hudson River Railroad,—a balloon-stacked wood-burner named *Ohio*.

When, after a short time, the Springfield Car & Engine Company decided to withdraw from active operation, it disposed of its business to Stone & Harris, who had an iron works, while the stock of tools in its car department was acquired by T. W. and Charles Wason, who proceeded to occupy the Lyman Street premises.

Springfield Locomotive Works (Bemis & Company)

This, the second firm in Springfield to be engaged in locomotive manufacture, was under the management of Blanchard & Averill, later Blanchard & Kimball, and was in 1855 employing one hundred forty

hands, and turning out two locomotives a month, as well as stationary engines and machinists' tools.

This company's output included five locomotives for the Western Railroad (now the Boston & Albany), which was built in 1857. They were all of twenty-seven tons each, and were named the *Albany, Alger, Atlantic, Henry Gray* and *Pacific.** This company also built at least one locomotive for the Connecticut River Railroad in 1854.

After its early operators failed up, the business was carried on by S. C. Bemis & Company for a short time, after which the tools and fixtures were sold to the Hannibal & St. Joseph Railroad in Missouri.

N. W. Talcott Axle Works

This firm was established about 1860, by Norman W. Talcott whose place of business was located just east of the Springfield Depot. In 1886 the enterprise was owned by McFetheries & Lawton, and since May, 1889, by S. and W. C. Lawton. It manufactured wrought-iron tender and car axles, equalizing bars, locomotive drive-shafts and frames, shafting, bar-iron and heavy forgings.

The works was removed to Brightwood at the time that the new Wason plant was built there in the early 1870s, and for some time supplied Wason with certain production items that the latter's own facilities could not provide in those early days.

Greenfield's Place in the Sun

By Donald E. Shaw

The industrial history of this country is made up of "success stories" in the American tradition,—of small businesses which, through the years, have flourished and expanded and become world-famous.

Common to all these has been the foresight and the will of the founders to pioneer and the determination of succeeding generations to make their particular product the best in the world. So it has been with the Greenfield Tap and Die Corporation, the world's leading maker of taps and dies.

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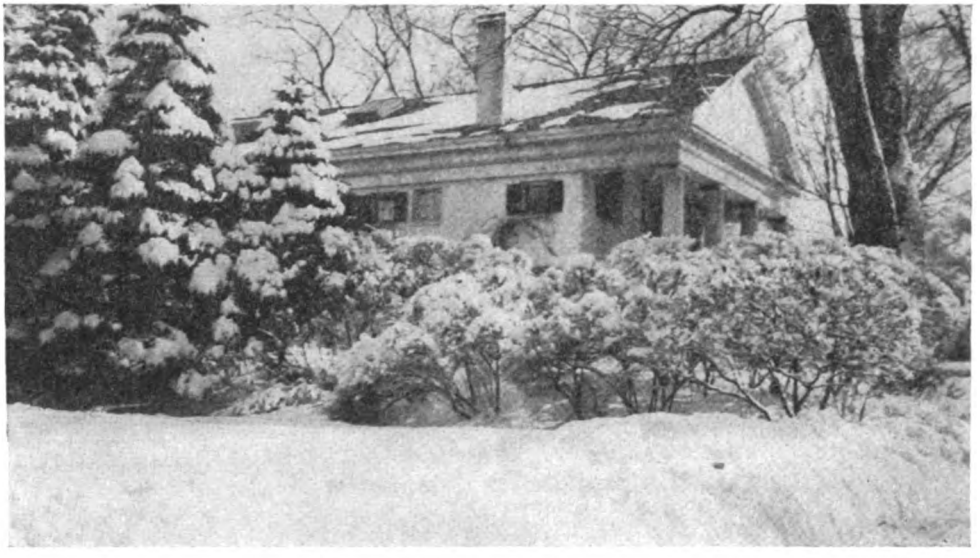
* The *Pacific* exploded at West Warren in 1858, and upon being rebuilt was named *Baltic*. Both the *Henry Gray* and *Pacific* were rebuilt by the Western Railroad, which had its own shops in Springfield, where under the direction of Wilson Eddy, the road's master mechanic, many of its locomotives were built. Eddy's Springfield-built engines acquired such a widespread reputation for dependability that they became known as "Eddy's Clocks".

Some locomotives for the Boston & Albany, which succeeded the Western through the 1867 merger, were also built in their Springfield shops, which were just north of the Connecticut River bridge, near the foot of Cypress Street, and about where the Wason brothers had made their first start, some years before. The only remaining unit of these railroad shops is a building at 41 Cypress Street, now occupied by the Cook Builders Supply Company, but which is shortly to be torn down.

Greenfield, Massachusetts, is just as beautiful today with its elm-shaded streets and colonial homes as it was seventy-six years ago. But during those years it has become world-famous as the home of fine threading tools. These Greenfield tools are used in every part of the world where metal-working is done. They have played a key role in the Machine Age that has freed mankind from drudgery. The modern American threading tool industry was born



Potter House, Greenfield, Corner of Main and High Streets

in Greenfield in 1872 with an idea for a better die. The chief industry of this Connecticut Valley town has never ceased pioneering in its field to this day.

The town blacksmith was the leading metal-worker in 1872, the year Greenfield Tap and Die was "born". And a mighty man he had to be in order to worry a thread onto a piece of metal with that primitive threading tool,—a "jamb plate". Forerunner of modern threading tools, the "jamb plate" was a crude vise-like tool that clamped onto the piece of metal to be threaded. It was then laboriously twisted back and forth until a thread was actually "jammed" onto the metal. It was slow, hard work and the results were haphazard. Working to tolerances of perhaps a sixty-fourth of an inch, the metal-worker of 1872 would be amazed at the accuracy of modern Greenfield threading tools, measured in ten thousandths of an inch.

The history of the Greenfield Tap and Die Corporation, as well as that of its predecessors, has been the history of the development of ever-finer and more accurate threading tools to serve the needs of industry. This owed its origin to one man who had a workable idea in his head, and who, one day in 1872, stepped off the train in

Greenfield with a patent in his valise for a revolutionary kind of threading tool,—a two-piece die which would cut accurate threads in one simple operation. This man was John J. Grant. Grant's die consisted of two adjustable half-discs of metal threaded on the inside and set into a metal frame or "collet". This was the first effective threading die. It would cut accurate threads on a rod in one operation. From this first basic design by Grant, all modern dies have been developed. The "Little Giant" screw plate, introduced in the mid-1870s, set a standard for accuracy and strength in cutting screw threads by hand which has never been surpassed, and is in use today all over the world,—developed from ideas which had been worked out by two Greenfield brothers, F. E. and F. O. Wells, in the infancy of an industry which was to grow until this quiet New England town became the world's center for the manufacture of precision threading tools.

When, early in this century, throughout the nation hundreds of new factories were trying to meet the swelling clamor for automobiles, sewing machines, telephones and a score of other "new fangled gadgets", there was a great need for automatic machines and high-speed methods of production,—and a new type of threading die for machine use. Greenfield Tap and Die met this need with the "Acorn" die, so-called because of its shape which is similar to that of an acorn and consists of prongs of threaded metal projecting from a circular metal base. This is supported in a holder which in turn fits into the chuck on the machine. Almost overnight it revolutionized machine threading. Its unique design made it possible to produce precision threads at high speeds. Through the years there have been refinements to its original design, but the "Acorn" Die is still the standard for accurate, high-speed threading on automatic machines.

As the "horseless carriage" became part of the American scene, it brought a new demand for threading tools. Over 1,000 makes of cars were on the road; machine shops mushroomed up over the country-side. But the automobile was only part of it, the country was on the threshold of a tremendous new mechanical age. And its future literally hung on a thread, for without fast and accurate threading tools, the miracles of modern precise machinery would have been impossible to attain. Greenfield's development of improved designs in taps set new standards for cutting internal threads. First operated by hand with tap wrenches, these taps later were used in drill presses, high-speed tapping machines and automatic screw machines to give greater speed and accuracy of production.

Greenfield Tap and Die got into gage-making in a big way in World War I, the first mechanized war in history. Overnight, hundreds of new plants had to be rushed into production to meet the need for mechanized fighting equipment. And in all these plants, the No. 1 need was for gages,—to guarantee absolute accuracy in mass production and to insure the interchangeability of parts. Longtime specialists in precision tool manufacture, Greenfield Tap and Die had

been making gages since the turn of the century,—so the Army came to "Greenfield".

During World War I, Greenfield Tap and Die turned out tens of thousands of gages. Latest in gage-making has been the development of a new type of chromium-plated surface on gages. This exclusive plating method means longer-lived gages, more than makes up for their high first cost and results in worthwhile net savings. Thread gages as well as plain gages can be furnished with this chromium-plated surface.

Of equal importance to the improvements which the Greenfield threading industry made in their dies, were the many developments in taps used for internal threading. Perhaps the most important of all was the invention in Greenfield of the so-called "gun" tap, which was to solve one of the greatest of tapping problems, the tendency of chips to gather and clog the flutes of the tap. This caused breakage, inaccurate threads and slowed-up production. The "gun" tap has a spiral pointed flute, which causes the tap to cut a curling chip that is forced, or "shot" ahead of the tap as it threads. This "shooting" action gave the tap the name "gun". It has since been widely copied and is frequently known as the "spiral pointed tap".

The years following World War I found Greenfield pioneering in the development of ground-thread taps, toward an astonishing degree of accuracy,—some of these are held to a tolerance of .0005". Ground on centers which themselves are lapped for high precision, a ground-thread tap has an outside diameter, pitch diameter, shank and chamfer that are highly precise. This method of manufacture revolutionized threading tool performance by making possible an accuracy previously impossible on a production basis.

Mass production during World War I had brought into sharp focus the need for screw thread standards throughout industry. Interchangeable parts were the essence of America's busy assembly lines. When the National Screw Thread Commission met in Washington during the early 20s, "Greenfield's" president, the late F. O. Wells, urged strongly the adoption of standards for threaded parts. The efforts of Mr. Wells and others produced results which have meant vast savings to users of precision tools and have been a key to the industrial growth of the country. Greenfield Tap and Die continues today to work for screw thread standardization as it has during its entire seventy-six years of pioneering leadership in the threading tool field.

Looking back now over its first three quarters of a century of pioneering in the development of threading tools and allied products, Greenfield can derive great satisfaction from many things, including the fact that its gage "war plant" was already ten months in production when the Japs struck at Pearl Harbor. As a matter of fact, the first gage was completed a month before the plant was officially declared open for operation. It had been built and equipped in rec-

ord time at a cost of over a million dollars, being of the very latest design and construction, with glass-and-brick walls, indirect lighting and air conditioning as well as the most modern gage-making machinery and inspection equipment.

Greenfield Tap and Die is understandably proud of this achievement, because it was the outgrowth of many years of cooperation with the army's long range procurement program. Ever since the conclusion of World War I, this company and many of its key personnel have been closely identified with the Industrial Mobilization Program and the Defense Program which went into high gear early in World War II. Hence, its gage plant was not so much an overnight "war plant" as it was the natural culmination of an integrated program.

With a record of five "E" awards behind it, this "war plant" is now a "peace plant", utilizing the organization and the new techniques developed during the past seven years to meet an unprecedented peacetime demand for gages.

A recent development in the manufacture of gages has been Greenfield Tap and Die's introduction of formed clearance in the major diameter of ring-thread gages. Before this development, root clearance was ignored, but under the more scientific manufacturing procedures guess work is eliminated and formed or controlled clearance has resulted in a greatly increased wear-life on ring-thread gages.

In 1944 Greenfield Tap and Die took one of the most important steps in its seventy-six years of pioneering service in the threading tool field. It acquired The Geometric Tool Company of New Haven as a major subsidiary. Geometric has a reputation nearly as old and as famous in its field of Self-Opening Die Heads and Collapsing Taps as that of Greenfield in the solid threading tool field.

The two go together naturally to complete a line of threading tools and gages for every size and type of job. It adds Geometric's fifty-five years of know-how to Greenfield Tap and Die's seventy-six years to make a total of 131 years of pioneering research available from one source. Screw threads,—billions of them,—cut with taps and dies, and checked with gages, help to hold together our modern mechanized civilization. Gages themselves are the key to mass production that brings the fruits of science to millions instead of a few. Truly, as the "threading tool capital of the world", Greenfield in Western Massachuetts, has a key role to play in the World of Tomorrow.

Friction Matches

By Florence Thompson Howe

Candlelight days, with their stories of the constant fire on the hearth, and the common use of flint, steel and tinder in every household, seem dim and distant in the glare of this modern electrified world. But it was less than one hundred years ago that the tinder

box was first put aside for the friction match, invented by a New Englander, Alonzo Dwight Phillips of Springfield. According to local historians, Phillips was an unknown shoemaker, working in a powder-mill in East Hartford in 1831 and experimenting with the ingredients of powder, when he first conceived the idea of igniting a compound by friction.

For many years the methods of striking a light were very primitive, just as they were in Europe, many families possessing either no adequate means, or very imperfect ones. Alice Morse Earle in her delightful book *Home Life in Colonial Days* tells of some of the difficulties:

"If the fire in the fireplace became wholly extinguished through carelessness at night," she says, "some one, usually a small boy, was sent to the house of the nearest neighbor, bearing a shovel or covered pan, or perhaps a broad strip of green bark, on which to bring back coals for relighting the fire. Nearly all families had some form of a flint and steel—a method of obtaining fire which has been used from time immemorial by both civilized and uncivilized nations. This always required a flint, a steel, and a tinder of some vegetable matter to catch the spark struck by the concussion of flint and steel. This spark was then blown into a flame. Among the colonists, scorched linen was a favorite tinder to catch the spark of fire."

"The flint, steel and tinder were with a ring, a flint, a horse-shoe-shaped steel, and an upper lid with a place to set a candle-end in, to carry the newly acquired light."

Anyone who has ever tried the intricacies of flint, steel and tinder, will understand that it was a laborious process, requiring some skill and much patience. Charles Dickens said that if you had good luck you could get a light in half an hour!

Small wonder then that Alonzo Phillips had an incentive as he worked away at his experiments in the powder-mill, until at last he succeeded in igniting his compound by friction. At about this time, so the story goes, one Daniel Chapin, of the famous old Chapin family on Chicopee Street (then Springfield), was engaged in boating wood down the Connecticut River to Hartford, where he made the acquaintance of Phillips. When he learned of the match idea, and considered that, in manufacture, pine wood was important, he induced the inventor to come to Chicopee Street where the coveted pines were plentiful on the plain.

Here, in the ell part of the historic old Frederic Chapin house, the two men formed a co-partnership and set up their match-making establishment. It was not until October 24, 1836, that Alonzo Phillips was granted United States Patent No. 68 for the invention of the friction match. Evidently manufacture had commenced prior to the issue of the patent, as the Hampden *Whig*, a local newspaper, in its issue of October 19, 1836, observes that "the patent friction matches of Chapin & Phillips are all the go."

In the issue of September 21, 1836 the *Whig* offers the following advertisement:

"Friction Matches

Pedlars and others can be supplied with Friction Matches of a superior quality, neatly put up in one-fourth gross tin boxes, by calling on the subscribers in Maple Street a few rods south of the Baptist Church.

Hills & Winship"

This Baptist Church was on the corner of Maple and Mulberry streets. On the stream which came down along the line of the present Avon Place, Hills & Winship had a woodworking factory which was known as the "plane factory," in 1836. It would appear that they made the wooden parts of the matches for Chapin & Phillips.

The implements used in this early manufacture were primitive and not adapted to the large manufacture which the great demand for matches soon necessitated. The sales began by running wagons all over New England peddling matches. One of these peddlers' carts was in the possession of a citizen of Chicopee, and in daily use up to a few years ago. In the beginning there was some opposition to the manufacture, the newspapers saying that these contrivances were "a bid to incendiarism." Many shopkeepers would not sell them. The railroad had come through as far as Worcester, but they would not carry the matches, on account of the danger of ignition, so most of the distribution must needs be done by horsedrawn carts.

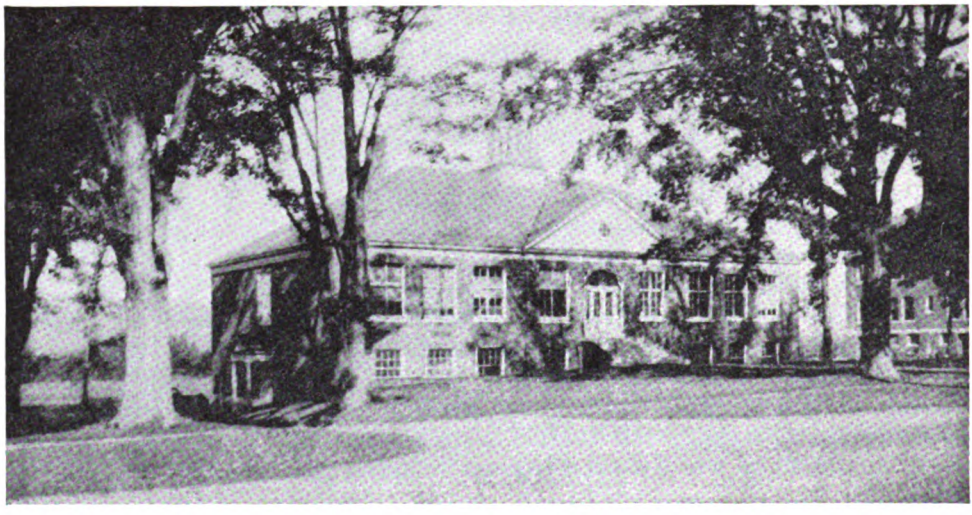
The matches, which first appeared in bunches, were later brought out in cards. The business was carried on in Chicopee for several years, and constant improvement was made in the machinery to keep pace with the growing demand for the output. Chapin & Phillips finally sold their machinery and their business secrets to a Boston firm who continued the manufacture and sale under the Chapin & Phillips name. Later the name "Boston Match" was adopted, and the product was commonly known down to recent times.

Today the endless chain of the match machine in the modern factory turns out 600,000 matches an hour. The tin peddlers with their match cries and their neighborly gossip have vanished from the New England hills. Only crude bits of sulphur-tipped pine and a ramshackle building on Chicopee Street remain to remind us of the efforts of Alonzo Dwight Phillips. And in the museums treasured by local historical societies, queer, round black boxes house the flint and tinder of candlelight days.

1848—A hundred years ago D. H. Brigham, whose name is perpetuated on Main Street in Springfield, had a men's furnishing store at Vernon Street, where he sold quantities of paper collars. Such was the volume that he begrudged the manufacturer his profit and so formed a partnership with George Ray for the manufacture of them.

In time, Brigham sold his interest to Varnum Taylor, the firm becoming Ray & Taylor. Due to the Civil War, the business prospered beyond expectation, for the soldiers all wore paper collars. With another turn of the wheel, Ray sold his interest to George W. Tapley and the business continued as Taylor & Tapley. Yankee ingenuity then took a hand in boosting sales.

Popular at the time was a toy called the zoetrope, or wheel of life. A round paper box, some four or five inches in diameter, was mounted on a spindle so that it could be spun rapidly. Narrow slits



Center School, Northfield

in the sides allowed one to look into it as it revolved. On the inner side was a paper band, with varying pictures of an object in motion, such as a galloping horse. The effect was to give motion to the picture, just as Walt Disney's pictures are produced. It was the birth of moving pictures.

Paper collars, worn but once, retailed at ten cents a dozen, packed in a round paper box. It cost but a trifle more to use a zoetrope for a box. The result was overwhelming, for the youngsters saw to it that father wore Taylor & Tapley collars.

With the advent of the celluloid collar, paper collars lost their appeal. Then history repeated itself, for Taylor & Tapley in turn begrudged the celluloid maker his profit and became manufacturers of the raw material, as well as the celluloid collars.

On the death of Varnum Taylor, the business was split two ways; the cloth-backed paper division becoming the United Manufacturing Company, now on Birnie Avenue. Paper collars were still made,—and sold to the undertakers. With Silas Kenyon, who had been a bookkeeper for Taylor and Tapley, George W. Tapley took over the celluloid division and from this sprang the Fiberloid Company.

With a bit of poetic license, one might say that D. H. Brigham was the father of the Springfield branch of the Monsanto Chemical Company.

Sericulture in Western Massachusetts and The Silk Industry of Northampton

By Donald E. Shaw

Northampton and vicinity has produced in its day a number of nationally-known products, through its varied industrial enterprises,—one, and in many ways the most important, of which centered about both the production and manufacture of silk. The Northampton Silk Company, established through the efforts of Samuel Whitmarsh, attempted to do this well over a century ago, at the time of what was called "The Silk Craze." From this and later-established companies, Northampton and the Mill River area subsequently achieved a notable reputation as a silk center.

The silk industry here was unlike the woolen, cotton and button manufacturing enterprises which sprang up along the Mill River in early days. These latter were to a great extent locally-financed, for one thing, whereas both the culture and manufacture of silk owed their early development to initiative and capital from outside the Northampton area. Furthermore, silk had a few years of rapid growth followed by a decline, before it was finally to take hold as a permanent established industry during the 1850s.

For the origins of silk manufacture, one is taken far back through the ages. China is generally given credit for first silk culture, although according to some claims, it began in India. Chinese historians speak of silk-raising extending as far back as a century before the date assigned to the Biblical deluge. Use of the mulberry tree for feeding silkworms is mentioned in an ancient work as having existed in 2200 B.C. Silk culture remained a Chinese secret until missionaries brought it to Turkey and eventually it spread through the Balkans and throughout Europe.

Silk culture had been encouraged in America as early as 1622. In these early colonial days, however, silk production was to have a most fitful and uncertain existence here. During the reign of King James I, through the influence of the Crown, Colonial legislatures had passed an act requiring that ten mulberry trees be planted on every hundred acres. There was a fine exacted for the neglect of this duty,—along with a premium for every pound of silk produced. With the ascent of a new king to the British throne in 1666, however, all acts providing for bounties for silk, or requiring mulberry trees to be planted in Virginia, were repealed, and an interlude occurred in sericulture until the last years of the century, when several French Huguenots settled in South Carolina, skilled silk workmen and earnest in their endeavor to cultivate it in profitable quantities. At about the

same time, another colony was formed in South Carolina which was known for more than a hundred years by the name of Silk Hope.

During the early part of the Eighteenth Century, the silk industry was also introduced into Louisiana and Georgia, although still on a small scale. For many years after the Revolutionary War, premiums and bounties for planting of mulberry trees and producing raw silk were authorized by various states.

There was little else than household manufacture of silk in the United States, however, until 1810, aside from the production of silk laces at Ipswich, Massachusetts, and the making of fringes, coach laces and tassels at Philadelphia. The first silk-mill on this continent was a New England enterprise established at Mansfield, Connecticut, in 1810, for the manufacture of sewing-silk by waterpower.

It was not until 1826, however, that The Congress of the United States issued a manual on the subject of silk culture, as an indication of a growing interest in the matter, which by 1830 had spread to various New England towns, including Northampton. The *Hampshire Gazette* pridefully announced on October 29, 1828, that Mrs. Charles Starkweather of Northampton had been awarded a premium by the Hampshire, Hampden and Franklin Agricultural Society for a sewing silk she had made that was "superior in thread and coloring to the imported article". A little over a year later, Mrs. Starkweather's raw silk was being proclaimed by the same newspaper as "the most beautiful specimen of raw silk we have ever seen".

As general interest grew, silk societies were formed in various places, and literature on the subject was given wide circulation. The states of Maine, Massachusetts, Pennsylvania and New Jersey offered bounties on cocoons and raw silk. This was at least in part reflecting a growing national concern over the amount of money being spent abroad, in the importation of goods that might just as well be produced in the United States. Imported silks alone, for the year ending September 30, 1830, amounted to some $10,000,000, coming chiefly from France and Italy. It was argued that most of the work involved in silk production could be carried on by women and children as spare-time occupations.

At any rate, an act for the encouragement of the culture of silk was passed by the Massachusetts Legislature and approved by the Governor in the spring of 1836. Under its terms, a bounty of a dollar and a half was provided for growing cocoons and for reeling and "throwing" the silk. The Governor was presumably reflecting a widespread belief when he declared in that year, "There is good grounds for the opinion that the manufacture of silk will become one of the greatest interests in Massachusetts".

By 1838, however, the response of the people of Massachusetts to this offer by the Commonwealth had attained only moderate proportions. In March of that year we find the Springfield *Republican* reporting that applicants for the Massachusetts bounty during the previous eight months totaled but 22; weight of cocoons, 1,390

pounds; of reeled silk, 33 pounds; of reeled and thrown silks, 115 pounds;* amount of bounty, $271.00.

Actual factory production of silk in the Connecticut Valley area had begun as early as 1829, with the Mansfield Silk Company in Connecticut going to work on it after some years of experimenting with various types of machinery. It made better than a $60,000 profit in 1834, and although it failed ten years later, it is said to have been the first enterprise in the United States to make silk manufacture "practically successful."

By 1834 silk dress trimmings were being made in Boston and a sewing-silk factory was getting started in Florence, a village on the outskirts of Northampton. A sewing-silk factory was in operation in Dedham, Massachusetts, in 1835, while three years later there was laid at South Manchester, Connecticut, the foundations of what was to become the extensive silk business of the Cheney brothers.

Although some of the men importantly identified with silk production in Northampton came up from Mansfield, Connecticut, the man who first established the industry in Hampshire County's shire city was Samuel Whitmarsh, an enthusiastic convert to silk culture, who came to Northampton from Boston in 1829. He worked hard toward introduction of a permanent silk culture in the region, planting thousands of mulberry trees and encouraging others to follow suit. Whitmarsh promoted the white mulberry at first, and then the Chinese or *morus multicaulis.* He acted as agent for setting white mulberry seed and slips of the *multicaulis,* and as evidenced by items in the *Hampshire Gazette* in the summer of 1835, offered to pay cash for cocoons, raw silk and mulberry leaves,—the latter at one cent a pound in quantity. In the autumn of that same year Whitmarsh went to France and Italy to acquire more knowledge of European methods of silk culture and manufacture, and sent back thousands of young mulberry trees and packets of seeds. A packet contained enough seeds for three or four thousand trees. These he sold at five dollars; the *multicaulis* trees, three feet high and taller, sold for thirty to thirty-five dollars per hundred.

In addition to Whitmarsh, others in this area were most active along similar lines, among them Dr. Daniel Stebbins. Throughout the 1830s, he bought and sold mulberry trees, raised silkworms, produced raw silk, wrote articles on the subject of silk production and even fostered a society,—"friends of the silk culture",—which met monthly to exchange information and ideas. Dr. Stebbins even tried, in 1844, to produce a quality grade of writing paper from the bark and leaves of the mulberry tree.

Among the enthusiastic devotees of this growing fad was Calvin Shattuck, who came to Springfield in 1812 from Charlemont, and

* The filament spun by the silkworm into a cocoon is so fine that several must be reeled together to produce a thread of sufficient size to handle. Several filaments from as many cocoons as are required for the size of the raw silk thread desired, are combined, twisted and reeled into skeins. A single cocoon of good quality may furnish from 400 to 800 yards of reelable filament. Silk that has been reeled is called raw silk; after being wound on bobbins and twisted, it is referred to as thrown silk.

who worked at the Springfield Armory from 1814 to 1844. Shattuck took up mulberry growing and silk culture in 1838, and was very successful. At one time, he fed 300,000 silkworms, said to be the largest number any one had in Massachusetts.

The *morus multicaulis,* while producing an inferior grade of silk, gained favor over the more hardy white mulberry, because luxuriant leaves ready for the feeding of silkworms could be obtained from trees of a single season's growth.

The demand became tremendous, with a veritable get-rich-quick fever sweeping through New England, New York and the Middle Atlantic states and even into the South. Speculators bought and sold with the expectancy of high profits. Some thousands of dollars worth of trees were sold for future delivery.

The silk craze reached its climax in 1839 when the bubble burst, and its participants, thrifty and greedy alike, were caught in the panic that followed. Prices fell sharply, and soon the *multicaulis* trees could not be sold even at ten cents a hundred.

Despite this early disaster, popular interest in silk culture did not wholly subside for some time. In 1841 delegates came to Northampton from various New England towns to attend a silk convention, and at that time expressed the belief that the United States might yet become a great silk producing nation. The Hampshire, Franklin and Hampden Agricultural Society continued to exhibit locally-raised mulberry trees and cocoons.

Going farther afield, we find the agent of the State Prison at Auburn, New York, giving notice in May, 1841, that he would pay three dollars a bushel for silk cocoons, of good quality, delivered at the prison, which was going extensively into the silk business, employing convict labor.

In 1842 there is a record of two trees of a single season's growth being sold at auction for $106 and $100 respectively.

By 1844, however, the whole matter of silk culture hereabouts had sunk to a degree of lassitude from which it made only feeble and intermittent efforts to rise.

While silk culture was doomed, the *manufacture* of silk was a different story. Here again we find Samuel Whitmarsh taking the lead. In the spring of 1836 while the *morus multicaulis* boom was still on, he launched a $100,000 company towards the financing of which some twenty-two New York subscribers contributed capital. This was known as the Northampton Silk Company,—and to those who witnessed its start, this company seemed a venture with almost unlimited promise, since it planned not only to manufacture silk but to produce its own raw material. Towards this end it planted in the first season one hundred thousand mulberry trees, expecting to increase them to half a million the second year.

In 1837 the *National Intelligencer* made the declaration that this Northampton enterprise was "the most extensive and well-regulated silk company in the Union", and that in two years it would be manu-

facturing $100,000 worth of silk fabrics annually from raw material, created chiefly "from worms on the spot".

Whitmarsh himself, as late as 1839, shortly after the silk culture craze had sharply subsided, was looking toward a time when factories would be built in all parts of the country which could look towards a domestic silk supply to fill their entire needs for raw material.

The Northampton Silk Company not only carried on silk culture, but it advertised its willingness to contract for cocoons up to 10,000 bushels, delivered in good condition, at from $2.50 to $5.00 per bushel, according to quality.

Vermont and New Hampshire growers were advised to ship their cocoons by the Connecticut River boats. The company also imported cocoons, along with raw silk in considerable quantity from France. From France also came some of the machines for reeling and weaving. The reels were steam-driven.

The first successful power loom for the manufacture of silk had been installed in Providence at the Valentine factory in 1834, and early in its career, the Northampton Silk Company adopted it for its ribbon manufacture.

The company secured the services of Edward Valentine, one of the two men who had come from England to Connecticut in 1838, and who were the first in this country to make a business of silk dyeing and improving its processes. They had soon secured the patronage of most of the Connecticut silk manufacturers. Valentine moved to Northampton after about a year, and in that town continued his business of silk dyeing until he passed away in 1851. It is said that Connecticut's well-known Ward Cheney had learned the main points of silk dyeing from Valentine in 1844, while the latter was plying his trade in Northampton.

At first the Northampton Silk Company manufactured only sewing silk and ribbon. The *Hampshire Gazette* of February 1, 1837, carried a notice that sewing-silk was "used by the tailors in town and pronounced by them to be a very excellent article superior to the majority of Italian silk."

Its output in the first year, ending April 1, 1837, was valued at $40,000, with some sixty workers then in the company's employ. But following this auspicious start, the company soon ran into trouble.

In 1839 Samuel Whitmarsh withdrew, to purchase another factory in Northampton for the purpose of continuing silk making. However, he shortly thereafter removed to Jamaica to attempt the culture and manufacture of silk there, where the government was making most attractive offers for its encouragement. He did well enough to enable him to return to Northampton and liquidate large debts which he had incurred in his earlier venture there,—but later other calamities befell him, and apparently he gave up the silk business entirely, and returned to Boston to undertake several other manufacturing projects, which similarly met with little success.

Meanwhile, the management of the Northampton Silk Company had been turned over to Joseph Conant, a native of Mansfield, Connecticut, who had had ten years' experience in the silk business when Whitmarsh brought him to Northampton. Conant leased the plant and tried to run it, but made little progress and sold it in April, 1841, to the leaders of the newly-organized Northampton Association for Education and Industry, for $22,250. At the time of the sale the property included about four acres of land, a brick factory, a water privilege with a twenty-foot fall, a saw and planing-mill, machinery sufficient to manufacture one hundred and fifty pounds of sewing-silk weekly, five frame dwellings and three to four thousand mulberry trees.

This, Northampton's first silk company, had gotten under way in the midst of the silk craze, and its proprietors had made a heavy initial investment in mulberry trees at prevailing high prices. These represented great losses after values had been suddenly deflated with the bursting of the silk boom. Although most of the raw silk used here was imported, the company was spending much money on cocoons, reels and local labor in its effort to produce the raw silk. Labor costs were extremely high with relation to European and particularly Asiatic labor.

It was felt that only when the silkworms could be tended by housewives in their spare time, or by children or the aged and infirm, could the wage costs be kept sufficiently low to yield the company a good profit. However, it was found that such work produced a poor quality of raw silk, and only a fraction of the total amount needed. Furthermore, a ten percent duty on all raw silk coming from east of the Cape of Good Hope put American manufacturers at a distinct disadvantage compared to the Europeans who paid no such duty, and who were permitted by the French indemnity treaty to flood the United States market with duty-free goods. Only sewing-silk bore an import duty, and this failed to come up to expectations as a protective means, it would appear.

Other silk making concerns, created at about the same time as the Northampton Silk Company, were also failing to make good on their stockholders' hopes and expectations, and by 1840, three of the largest of them had ceased to exist. The few that managed to survive gave up all connection with attempts at American silk culture, although some New England silk manufacturers, we are told, took the momentous step of sending agents with reels to China about 1840, and proceeded to teach native labor how to prepare silk for American mills. Thus, as the saying went, "Operations begun on the banks of the Yang-Tse-Kiang were completed on the banks of the Connecticut."

The old Northampton Silk Company had been purchased by a group of men who came to Northampton late in 1841 to found a coöperative colony, the Northampton Association of Education and Industry, or as it was generally called, the Florence Community—one of many such associations formed in the nineteenth century. Aroused by the misery and economic inequalities so evident every-

where under the growing factory system, their founders sought a solution to the problem by the establishment of settlements, some coöperative in form, with others such as the religious societies, going as far as sharing all goods in common. The Northampton Association's form of organization distinguished it from many of the other associations. It was a cooperative colony not extreme in any way, placing emphasis on tolerance in religious attitudes and equitable social and economic relationships. On the other hand, its method of paying labor was frankly according to need rather than output.

The founders of the Community were men of varied experience. Samuel L. Hill was manager of a Willimantic, Connecticut, cotton factory and an ardent supporter of several reform movements. Joseph Conant, at that time owner of the silk-mill property in Northampton, was related to Hill by marriage. It was probably through Conant that Hill and his associates learned of the group of dwellings and factories, with water privilege and land, that was available in Florence at a low figure. Another successful business man in the original association was George W. Benson, from Brooklyn, Connecticut, who was brother-in-law of William Lloyd Garrison, and himself long a worker in the anti-slavery movement. The secretary and educational director was William Adam, a native of Edinburgh, who had once been a missionary to India and later a professor of Oriental languages at Harvard.

The members of the association were recruited from many states. As many as two hundred persons joined it, although due to withdrawals, the total number at any one time did not reach this figure.

The society was made up of two distinct bodies, a stock company and an industrial association, each with its separate meetings and accounts, although the same persons were members. The capital of the stock company was to be $100,000 in shares of one hundred dollars, of which three-fifths was to be paid in. Each share entitled its holder to one vote, provided no one person had more than ten votes. Should a person without capital be considered a desirable member of the Community, he could subscribe for stock and pay for it from the proceeds of his labor. Interest was six percent, but was not payable for four years.

As early as 1842, three of the members most interested in the silk department, Joseph Conant, Earle Swift, and Orwell Chaffee, left the Community to set up a silk-mill along the usual capitalistic lines at a nearby water privilege in Florence.

Meanwhile the Community got off to an auspicious start. The industrial association by vote established various departments of industry, a member being free to devote his efforts to one or more departments. The directors of the several departments in consultation with the officers of the association, fixed the rate of remuneration,—with no discrimination because of sex allowed. They bought all supplies and sold the articles manufactured or produced. Every member was to live on Community land and secure his supplies at cost through the central purchasing agency. The Community bought

and sold in the common market, but within its organization, it functioned as a strictly coöperative association.

One of the first decisions of the Community was to shorten the working day from the then-customary twelve hours to eleven. It also decided to pay wages, not according to work performed, but according to the age and therefore presumably the need of the recipient. At the end of the first year, the following scale was adopted:

> Under 12 years of age—one cent per hour.
> Between 12 and 16—three cents per hour.
> Between 16 and 20—four and a half cents per hour.
> Over 20 years—six cents per hour.

Allowances were then made for food and clothing—again according to age.

Of the various departments organized, silk was the most important. The association had unfortunately taken over Whitmarsh's mulberry trees with the purchase of his property, and once more fostered the raising of silkworms. Sewing-silk and twist were manufactured. The first six months of 1843 showed a very slight profit, but by 1845 this department was in a bad way. A deficient supply of raw materials, plus occasional lots of unsuitable silk were given the blame for this situation,—at any rate, the growing of silk hereabouts had again proved to be a disappointment.

When this important phase of the Community's activities failed to live up to expectations, some members of the group, now thoroughly dissatisfied, withdrew. This culminated in a gradually deteriorating situation. The debt of the Community had remained at nearly $40,000 without prospect of any new stock being taken up; criticism had been directed at the heads of the various departments regarding their methods of conducting business. "Mutual criticism," the Community's chief means of social control, it seemed was causing a good deal of social friction. The association had labored under a burden of debt since the start, for only $200,000 had ever been subscribed, and more had to be borrowed right at the start in order to conduct the business. Without the strong religious ties which seemed to be the only bond strong enough to hold such associations intact for long, there now seemed little hope that this one could successfully continue.

Shortly after the failure of its silk industry, it was generally agreed among the survivors that the Community should disband. Two months later,—on November 7, 1846,—the association was dissolved.

The transition to more orthodox business methods was easy. The two association organizations were united and shrunk to a small company under the management of one of the Community's leaders. Samuel Hill assumed all debts on condition that he be left undisturbed to work out problems in his own way. The silk manufacturing firm which he established later became the Nonotuck Silk Company. With the Florence Community's dissolution, the shorter working day, equal pay for men and women, wage payment according to need, were all

left behind, and Florence became a village whose manufacturing practices were similar to those of the New England of that day.

However, the Northampton Association is of some interest in that it had kept the silk industry going, even though without much success. When it disbanded, it left buildings and machinery in working order, and workers experienced in silk manufacture. What was even more important, there were men able and willing to take over the industry when the Association gave it up,—business men who had been for a time Community members, but were now prepared to return to more generally followed commercial practices. Besides this, the Community left in its wake, some remnants of its former benevolent interest in reform. Some of the business men of Florence,—particularly those who had been members of the Florence Community,—manifested broad public interests and largely through their efforts the village came to be distinguished by an exceptional degree of civic pride. None was to be more active along these lines than Samuel Hill. In 1863 he was to help found, and for the rest of his life was president of, the Free Congregational Society of Florence, which had as its aim "the promotion of general intelligence, good morals, and liberal religious sentiments." For the first ten years of its existence the Society met in rooms on the second floor of the school house which Hill had built for the Florence school district. It was then decided to build a hall to serve not only as a meeting place for the Society, but as a general community center. It was largely through Hill's financial aid that this building was erected. He also gave money to found the Florence Kindergarten, opened in 1876. At his death in 1882, he was to leave a trust fund for the broadening of the kindergarten's activities, and it became the Hill Institute, offering vocational and adult education classes.

A. T. Lilly was another leading contributor to various educational enterprises, including the Lilly Library of Florence, the Hill Institute, the Community Hall and Smith College. In 1859 he helped to establish evening schools. His first gift to the Florence Community Hall was $10,000 and he added more from time to time. In 1886 his gifts made possible the Lilly Hall of Science at Smith College. Upon his death in 1890, he left his entire estate, estimated at $250,000, to the trustees of the Hill Institute.

When Samuel Hill took over the property of the Florence Community, he sold most of the land to persons willing to take up residence thereon, reserving just enough ground to enable him to carry on the manufacture of sewing-silk. When he needed further capital, he turned to Judge Samuel L. Hinckley of Northampton, who joined him as a silent partner. In 1851 the business was still small, but was growing. By the mid 1840s railroad connections had been established, which brought Northampton within easy access to outside centers, but it has been said that it was the invention of machine twist that revived the silk industry of Northampton. This was a silk twist adapted for use in the newly-invented sewing machine,—and according to report, the first acceptable sewing machine twist to be spooled

had been manufactured in the early 1850s by a Northampton concern, and sent to the newly-formed Singer Sewing Machine Company.

The new and large market that this created was to be duly exploited by Northampton's young industry. The Hill and Hinckley firm, which in 1855 had admitted several local men into partnership, was incorporated eleven years later as the Nonotuck Silk Company.

This company was to enjoy phenomenal growth in the years following its incorporation. This coincided with the post-Civil War boom. Earlier, in order to provide money to meet the heavy expenditures of our government caused by this war, a high import duty had been placed on all luxuries, including silk. By 1864 the duty had been raised to sixty per cent, intended not only for revenue now, but for protection as well. Following this, there was an immediate show of interest among those active in silk importing, to consider the enlarged possibilities of home manufacture,—and those who were already engaged in silk manufacture here received a fresh stimulus. Large profits were being earned and big dividends being paid. The silk industry was flourishing everywhere,—between 1870 and 1890 it was said to have made greater progress throughout the nation than any other textile business.

In Northampton the Nonotuck Silk Company was certainly no exception to the trend. Even in the depression year of 1873, $62.50 was paid on each share of stock. It was $75.00 a share in 1880. From 1881 to 1893, dividends ranged from ten to twenty percent annually. Certainly the men who were fortunate enough to have come into ownership in this business early in its rise, made ample personal fortunes. The company was most enterprising in its methods. Sewing-silk had been made from the beginning, but with expansion of output and changes in style came the addition of many varieties of thread and of other silk products. Well before 1895, the Nonotuck Silk Company with its trade name "Corticelli" was well known throughout the United States for its spool silk, machine twist, crochet, knitting, lace and filo silk, Persian and Roman floss, rope, embroidery and etching silk, buttonhole twist, and many other products.*

Nonotuck embarked on excursions into other fields of activity at this time. The company has claimed to have been the first in the United States to manufacture silk hosiery and silk underwear.

Knitting machines were brought from England in 1885, and although clumsy, remained in use for several years. By using both hands and both feet, the operator could produce two stockings simultaneously, but it was too laborious and expensive for the result to be anything but a luxury product, and such manufacture was abandoned. At that time, woolen stockings were generally worn, and their knitting by hand was still a widespread accomplishment. The

* Paterson, New Jersey, a mill city within easy access of New York markets, has grown through the years since the early 1840s to be the leading silk producing center in the United States. However, the sewing silk and floss industry, a distinctive manufacture worthy of separate recognition as a textile art had always been chiefly confined to New England.

manufacture of silk hosiery was not again attempted by the Nonotuck Company until 1920.

A more successful venture was that into the manufacture of spun silk, begun in the eighties, and continued till 1930. Damaged cocoons, floor sweepings and the waste of raw silk were processed and spun like cotton thread. The idea had been brought from Switzerland, and proved a means of turning into profit what would otherwise have been purely waste material.

In addition to its manufacturing plants at Florence, Leeds and after 1884, at Haydenville, the company maintained a saw-mill where lumber was cut both for its own use and for sale, a planing-mill where shipping boxes were made, and a spool shop.

Prior to the middle seventies, the company's products had been shipped to New York and Boston, but now distributing agencies were also established in Baltimore, Philadelphia, Cincinnati, Chicago, St. Louis and San Francisco. For a few years around 1890, spool silk was sent to France and South America, but exports were interrupted by tariffs about 1893.

The next stage in the Nonotuck Company's development was the establishment of a branch plant in Canada. In the late eighties its directors purchased from Ira Dimock, one of the early partners in the company, the real estate, buildings and machinery then being used by him for the manufacture of sewing silk in St. Johns, Quebec. The business was conducted under the name of the Corticelli Silk Company, Ltd., and was managed by the directors of the Nonotuck through a resident agent. This Canadian branch was operated until 1911.

Expansion continued into the new century with little interruption. After the general depression of the 1890s, plant capacity was increased. The Leonard silk-mill, which opened in the eighties, burned down in the late nineties, and its property was purchased by the Nonotuck Company. A four-story addition was made to the Florence plant, with a finishing-mill being built soon thereafter.

Following various ups and downs during the first decade of the twentieth century, the Nonotuck declared an extra dividend, as it also did, in the years 1911 to 1913 and 1916. In 1917 the capital was doubled.

The first board of directors of the Nonotuck Silk Company had consisted of Samuel L. Hill and S. L. Hinckley, who had built up the enterprise until the time of its incorporation, A. T. Lilly, Ira Dimock, Lucius Dimock, J. D. Atkins and E. W. Eaton. Although all of these men were residents of Northampton when they formed the corporation, Lilly and the Dimock brothers had earlier been silk men in Connecticut. Atkins, who had learned the silk dyeing trade from Valentine of the old Whitmarsh days, had been a member of the old Florence Community along with Hill. Eaton alone was from outside, coming from Brooklyn, New York; he and his family, however, were from that time as closely associated with both the company and the community as were the others. These men were to remain directors and officers of the company for the rest of their lives. Their

activity in the silk business did not limit their business interest by any means. With various other associates, including the Haydens and the Willistons, they participated actively in many other enterprises, and furnished the business leadership under which the region as a whole was to emerge as a manufacturing center. The village of Florence, on Northampton's westerly outskirts, was the seat of their enterprises, with most of the establishments being built there or in the adjoining villages of Haydenville and Leeds. Thus around the silk-mills of the Nonotuck Company were to cluster numerous manufacturing enterprises organized by this closely knit business group, including cotton-mills, a brass-works, and the manufacture of brushes, emery wheels, cutlery, cash carriers, caskets, sewing machines, buttons and tacks, among others.

Perhaps most closely connected with this group of Florence business leaders was a series of companies incorporated during the years shortly following 1860. One of the most important of these was the Florence Sewing Machine Company. Its directors included Samuel Hill, D. G. Littlefield, I. S. Parsons, George A. Burr, J. L. Otis and L. B. Williams. It is said that Hill became interested in the possibilities of making sewing machines after seeing one on exhibition at the Crystal Palace in New York in 1855. It seems quite likely that his interest had already been aroused, if for no other reason than that the newly-invented sewing machine would create new markets for machine-twist silk, produced in his Nonotuck Mills.

At any rate, Hill made arrangements for further experimentation on the sewing machine at the Wells & Littlefield machine shop in Florence. Here the first Florence Sewing Machine was brought out in 1861. A company was at once formed to manufacture the machine, with an initial capitalization of $125,000, which was shortly increased to $500,000. In 1865 the company was employing one hundred fifty men and accounting for 13.5 percent of the region's total output in value of products. The plant capacity was doubled in 1868. Although Singer and several other manufacturers had been putting out their own models in large numbers since the late 50s, the Florence machine soon worked its way into a large market. This company manufactured wooden cases as well as the machinery, and was one of the few sewing machine companies that produced the entire machine. Display cabinets for silk manufacturers and thread-and-needle cases were also made here. The sewing machines were marketed through the company's own agencies in many cities, and were exported as well.

After a reorganization during the depression of the seventies, a new product was added,—oil stoves. In the early eighties a new model sewing machine was brought out,—the "New Crown." The company was operated by the Florence business group until 1891, when it was absorbed with other oil stove concerns in a consolidation under the Central Oil Gas Stove Company,—and the sewing machine industry was finally removed from the Connecticut Valley. In 1920 the International Silver Company of Meriden, Connecticut, purchased the old Florence Sewing Machine property and opened a branch plant.

The Nonotuck Company, as successor to the original Whitmarsh concern, was not the only silk manufacturing firm to grow out of the Florence Community by any means.

Three of the members of that organization, Joseph Conant, Earle D. Swift and Orwell Chaffee, who were Mansfield, Connecticut, men, had decided soon after the Community was established, that its coöperative form of organization was not suited to the promotion of a financially prosperous enterprise. As previously noted, they severed their connection with the Association and built a silk-mill of their own at a small water privilege on a nearby tributary of the Mill River. In 1846 the Conant Manufacturing Company, was incorporated with a $50,000 capital, for the making of sewing-silk. At all times a small enterprise, it produced sewing, twist, saddlers' and embroidery silk, and flourished for several decades.

Another company was established by William Skinner in 1853 in the Williamsburg district, in what was for a time known as Skinnerville. Skinner, an English craftsman, had been employed in a Northampton dye works, and also by the Conant silk-mill, before starting up his own company. In 1860 he was employing forty or fifty workers in his "Unquomock Mill" here. Skinner moved his business to Holyoke after the disasterous Mill River flood of May 16, 1874. This was the beginning of the great Skinner Silk firm of Holyoke, which as William Skinner & Sons is a multi-million dollar enterprise there today. Another small firm employing only forty operatives was also making sewing-silk and other products in the early fifties.

Far more important for the Northampton region than these enterprises were the establishment in later years of the Belding Silk and McCallum Hosiery mills here. Still another concern, the J. N. Leonard Mill, opened in the eighties, had been destroyed by fire ten years later, and the site and water-privilege was purchased by the Nonotuck Company.

Belding Brothers, a Connecticut corporation, established a branch plant in Northampton in 1876, being the first large outside enterprise to come into that immediate area. Some fifteen years later, Alexander McCallum opened his hosiery mill. The part played by these two concerns was to be a most important one in Northampton's industrial life in later years.

The silk-mill of Belding Brothers, like the casket factory, used steam power from the start, and emphasized the extent of transition from water-power to steam begun in the late '50s among the many industries that lined the Mill River. The destructive flood of 1874 here, which swept away dams on the upper stream and several factories with them, no doubt hastened this transition.* The introduction of steam power was an important factor in the growth of industry following the Civil War. This was accompanied by a rapid

* In 1939, the city aided by the Public Works Administration, diverted the Mill River's course back to its pre-1720 channel.

expansion of markets throughout the United States, along with vastly improved transportation and communication facilities, and far-reaching technological improvements in manufacturing of all kinds. Conditions were exceptionally favorable to the silk industry. In the crisis of 1873, it had suffered very little, and after the depression was over it prospered to an extraordinary degree. Improvements in machinery,—especially the introduction of the power loom,—along with a growing trade with the Orient and rapid changes in fashions, were significant elements in the progress of silk manufacturing in the seventies. It is quite evident that the Mill River region, small though it was, shared fully in the industrial expansion that was characteristic of the nation as a whole during the latter part of the nineteenth century. In 1900 value of output showed a five-fold increase for the thirty-five years since the Nonotuck's incorporation. During the period between 1900 and 1915, it was to be more than doubled again. Through all of this it is quite evident that the bulk of the region's industrial expansion went forward under the guidance of a relatively compact group of local men, with interlocking interests, closely connected by both business and family ties. These men were able to accumulate wealth from one or two leading industries of the region, of which silk was chief, and having rapidly re-invested this money in numerous other enterprises, became the dominant financial and business figures of the immediate area. This pattern of closely interlaced local investment and control is perhaps the most distinguishing feature of the region's industrial history.

Labor conditions and problems and labor-management relationships during the latter part of the nineteenth century were not too widely divergent from those to be found elsewhere in the Commonwealth, although emphasis given to certain policies by the Florence group of industries had left its mark. By 1900 about half of all the wage earners in the region had come to be employed in the silk-mills. While other industries were rapidy expanding, silk manufacturing was doing likewise, so that the proportion of silk workers in succeeding years remained close to half of the total.

In 1875, out of nearly a thousand silk workers, over three-quarters were female. The number of female workers remained twice that of men even after the establishment of hosiery and fabric departments where men performed most of the skilled work.

Many foreign-born workers came into the region, although not to the extent that they did in some industrial centers, such as Chicopee, where between 1890 and 1895, forty-three percent of the total population was of foreign birth. In the decades after 1870, Northampton's population was never less than seventy-five percent native-born, and by 1930, it was eighty percent. In the 1840s and 1850s there had been a sizeable ingress of Irish workers, and these, with the French Canadians who came along a little later, a few Germans and some English, and the native Americans from the

surrounding countryside, made up the industrial population of the last half of the nineteenth century.*

After 1900 came an increasing number of Polish and Italian workers: by the early 1920s, the predominant nationality in the cutlery workers was Polish; while the silk-mills also had a large number of Polish employees.

The large numbers of women workers in the silk-mills and the brush shops, and the semi-skilled nature of their operations, determined the generally low wage level of these industries at this time. Hours were long, but were eventually shortened by legislative action,—in 1874 a Massachusetts law made the sixty-hour week compulsory for women workers in certain specified industries; another reduction of hours to fifty-eight came in 1892, and still another to fifty-six in 1910. With so large a number of women employed in the silk-mills and brush shops, shorter hours for all were soon generally adopted throughout these plants,—while in the cutlery and other metals factories, shorter hours were to be obtained by the men through their labor organizations.

In earlier days, children had been employed in considerable numbers; in the silk industry, two hundred of the workers in 1875 were from ten to fifteen years of age. By 1900 the number of children being employed in the Nonotuck was small for a textile mill of its size. About thirty under sixteen were then at work there, according to a company report. The Nonotuck had established a night school as provided by Massachusetts law, and the children were spoken of as coming in after grammar school and in their vacations to sweep floors and trim lamps.

Recurrent economic setbacks interrupted the generally rising standards, particularly in the early nineties, when the Nonotuck was forced to cut wages and reduce running times to as little as three days a week.† The Belding Silk Company even had to close entirely for a time.

Recovery and expanded production was to follow, however,—and mechanization of production and labor-incentive plans set new tasks for workers and greatly altered old skills. Although spools were first introduced about the time that a successful machine twist was devised, in 1852, they did not come into wide usage until the seventies. Prior to that time, silk had been put up in skeins or wound on quills. A spool printing machine invented around 1879 by Lucius Dimock, one of the original partners, was put in use by the Nonotuck Company, and by an automatic feeding device it was able to increase the number of spools printed per minute from sixty to one hundred

* The expert cutlery workers of the early years came from Sheffield, England, and Solingen, Germany, some from a line of grinders going back five or six generations. Some of the silk dyers also were Germans.

† There is no indication, however, that silk workers were ever forced into the peculiar predicament of cutlery employees who, in a depression period in the earliest days of the Northampton Cutlery Company, were said to have been forced to take their wages in company products, and then attempt to sell the knives, etc., from house to house.

and twenty. An automatic starter was also added to the spooling machine, and the machines made quieter and more sensitive. The speed of the spooling machines was continually increased until by 1920 they were turning at the rate of 6,400—6,500 revolutions per minute,—nearly a third faster than the usual speed of these machines twenty years before. An automatic spooler that wound two spools simultaneously, and one that carried twelve spools, were tried in recent years, but were not extensively used, it is said, because good work demanded attention to a single spool at a time. The speed of the bobbins was increased in the early 1900s from 3,500 revolutions a minute to 6,000 or 6,500 when the continuous belt replaced the shaft. In the 1920s, a German automatic dye machine was introduced into one of the silk-mills, reducing the number of employees in the dye house from thirty-five or forty to sixteen or eighteen.

The Nonotuck Company tried various bonus plans in its attempt to achieve maximum production. In 1919, their so-called two percent bonus was replaced by one of two dollars per week for "employees who keep their work up to maximum capacity and who do not lose more than two hours per week." Minors who completed the full weekly time permitted by law were to be paid one dollar a week bonus under this plan, if their lost time was not more than one hour per week.

The labor policies of the leading industries, particularly those sponsored by the Florence group of business men, followed a paternalistic pattern, and was opposed to labor unions. Only in the metals factories and the hosiery industry did trade unions succeed in establishing themselves.

Instead of collective bargaining, extensive welfare programs characterized early labor policies of the silk-mills and other Florence industries. There had been company-owned houses as far back as oldest workers can recall. Ira Dimock, president of the Nonotuck Company, said in 1901 that his company owned fifty-seven workers' houses. Home ownership was also encouraged. Boarding houses were opened in both Florence and Leeds to provide not only room and board for working girls who came from a distance, but supervision over their conduct. The Nonotuck Company's boarding house in Florence was capable of accommodating sixty, although usually housing a smaller number. The girls were expected to go to their rooms at nine-thirty, and the lights were turned out at ten o'clock. According to the statements of older workers, this rule was rigidly enforced; to be a minute late meant a reprimand.

For a dance or concert, the closing hour was eleven o'clock. This close supervision was consistently a company policy, justified by such statements as "We put the house up at a good deal of expense. . . . We say to parents and brothers who live at a distance 'You can safely let your sister or your daughter come down here to the Nonotuck Mills. She is looked after and required to be in at suitable hours.' We have an interest in her."

A good moral character appears to have been a first qualification to be looked for when workers were hired for the mill,—and evidence of the lack of it was a basic reason for discharge. New employees received a list of rules regarding promptness, quietness, neatness and attention to work, which was expected to be observed. Lectures, concerts and dances in the community hall were sponsored and chaperoned by the company. Such community affairs, as well as the paternal attitude of the company officials, is remembered with pleasure by many now-retired employees. Said one who had been in the mill for forty years: "In the old days one of the bosses came to visit you if you were sick, and he never came empty-handed."

The Nonotuck Company began in the 1880s to provide for its employees in slack seasons by manufacturing for stock, spreading work, and giving family heads outside tasks such as mending fences, cutting down trees and repair work of various kinds.

Definite efforts were made to inculcate employees' pride in high quality workmanship and in the company products that they made. This was stressed by the entire Florence group of companies, which also was according all possible prestige to employees who had seen long service. Among the several firms that made particular efforts to encourage a stable labor force was the brush company with its "Twenty Year Club," and which rewarded faithful service with bonuses and vacations with pay. The Nonotuck Mills had so successfully pursued a similar policy that in 1922 there were one hundred twenty-five living employees who had been with the concern or its successor for over twenty years. Ten or these had more than forty years' service.

Children often followed their parents into the plants, sometimes several members working there at a time, occasionally to the third generation. When women employees got married and stopped working regularly, they were frequently called upon in rush periods to help out. As the president of the company told the Industrial Commission in 1901, "We frequently have six or eight or ten or a dozen of them that come in and work perhaps six hours a day, more to accommodate us than anything else,—women that grew up with us."

Workers who had been with the companies in "the old days" referred to it with pride. One elderly former employee of the Nonotuck said that when away from Florence she would hesitate to tell people that she worked in a factory but "in Florence it was different because everybody knew what a fine place it was."

From these same older workers, one gets the impression that Florence of "the old days" was vastly different from the modern industrial town. This is borne out by the many civic institutions established there in the nineteenth century which along with the varied social and educational activities of the community, owed much to such men as Samuel L. Hill, A. T. Lilly and Lucius Dimock, leading figures in the nineteenth century business group in Florence.

No union was organized at the Nonotuck plant until the knitters joined the Federation of Hosiery Workers in 1920, when a hosiery

department was established at the mill. The workers of the Belding Company, led by the weavers, organized a branch of the textile workers' union in 1921, the only local of silk workers in town. The union was not recognized by the management. At the McCallum hosiery plant, a union among the knitters was started in 1913.

There had been some strikes from time to time in earlier days,—as well as in later ones. Back in January, 1902, one hundred spoolers of the Nonotuck Company staged a successful three-day work stoppage,—declared at the time by the local press to have been the first strike on record in the Florence mills. However, it is known that there had been a strike of winders in 1894, and there may have been others. Later, in 1905, there was a strike of braiders and winders,—the one group protesting a proposed wage cut, the other seeking a wage increase. A compromise settlement ended a three-weeks work suspension at this time.

At McCallum's, a strike in May, 1915, forced restoration of a wage-cut made six months before, and in November, 1917, a strike of knitters in conjunction with those of other plants of the company in Philadelphia and Providence, won wage increases, a nine-hour work day and recognition of the Union. However, various work interruptions in the silk-mills in the twenties resulted in more loss than gain for the workers.

In 1919 McCallum's established a new organization alongside the Union, the so-called "Industrial Democracy" plan, which, an early form of employee-representation in industry, was widely advertised at the time as a panacea for labor troubles. This was, in its organization, patterned after government procedure, with the company's executive officers constituting a cabinet, the superintendents and foremen a senate, and delegates from among the workers, a house of representatives. This organization was destined for a short life, however. After the labor representatives "voted" themselves an increase in wages which the company felt was not justified by earnings, the prestige of the group went into a decline and it was dissolved after a year or two.

A few plants had come under outside control before the close of the nineteenth century,—some during the period following the depression of the nineties, when many companies throughout the nation were changing hands. The time was now coming when local ownership of the Mill River industries was almost entirely supplanted by absentee control.

Belding Brothers Silk Company had been the first large concern in no way connected with local enterprises, to establish itself in Northampton, where in 1876 it purchased a factory formerly occupied by a pocketbook firm, and here began the manufacture of silk and machine twist.

Northampton citizens, anxious to see this branch plant of a Rockville, Connecticut, concern established in their midst, raised the sum of $15,000 to pay off part of the mortgage on the building. With production once under way, it expanded steadily. The mill was

enlarged twice within the first five years following its opening. Silk fabrics were gradually made its chief product. In 1882 the Belding Brothers incorporated the company in Connecticut with a $650,000 capitalization, which was increased to a million dollars in 1886. In addition to Northampton, branches were established at Montreal, San Francisco and in Michigan. By 1909, when the company again increased its capitalization to three million dollars, it had eight plants operating in five different cities. In this same year, some additions were made to the Northampton plant.

The Nonotuck Silk Company was gradually passing from local ownership to predominantly outside control, although management remained in the hands of the old local families until 1921.

The McCallum Hosiery Company appears to have begun without the aid of large capitalization but soon grew into an important business. It was not an outside firm in its origin, but it came along after the nineteenth century local-enterprise period. It had been founded in 1885, by Alexander McCallum who, in partnership with William Constable, had begun experimenting in hosiery manufacture in the eighties. They had to bring machinery and skilled workmen from England and the Continent, since very little domestic manufacture in this field had yet developed in America, and skilled workers were hard to obtain. The firm even incurred a fine from the government for alleged importation of foreign workers, although the courts finally decided in McCallum's favor. In 1897, McCallum sold out his interest in the Holyoke enterprise and for a year was superintendent of Belding's small hosiery department in Northampton. Shortly, he, with his son George and Edgar F. Crooks, a former Belding manager, formed the McCallum Hosiery Company, with a $50,000 capitalization. The company purchased Constable's business in Holyoke, bought Belding's hosiery machinery, brought in new machines from England and started operations in 1899, with a new plant on West Street, Northampton, and using but twenty-four knitting machines at the beginning. The firm appears to have had no difficulty in attracting abundant financial backing, for its capital was doubled within five years, plant additions were made and the old tack factory in Florence was bought and converted into a throwing mill, organized as the Northampton Silk Company. Further additions were made to the mills in 1909 and 1910. Expansion was rapid from then on. McCallum purchased a Providence plant in 1911, which was reorganized as the DeLuxe Silk Hosiery Company. In 1917 a Philadelphia mill was bought, and in 1919 a throwing mill was opened in Holyoke. By this time, McCallum's Northampton mills were employing two hundred eighty-one workers. McCallum was one of the first plants to be entirely run by electricity, and is said to have been the first to experiment in the use of nylon.

By the time World War I broke out, although ownership of Mill River industries was no longer predominantly local, in management they were little changed. The first generation of local business leaders had long since passed away, but their sons and grandsons, and other

local people had grown up with the companies. Even such a strictly outside firm as Belding's had now been in the region sufficiently long to be practically stamped with its pattern.

Even prior to the entry of the United States into the war, there had been huge orders from Europe's belligerent nations for supplies of all kinds. As a textile center, the Northampton region early felt the impact of this great wartime demand. American silk exports almost trebled in value between 1914 and 1917. After the United States entered the war, even greater expansion occurred. The value of silk goods in the Northampton area, which had almost doubled in the three years before 1917, was by 1920 two and a half times the 1914 figure.

The Nonotuck Silk Company, feeling the shortage of skilled workers, at one time was offering bonuses to employees who would bring in experienced workers to the mill. This company was selling to the government all the spun silk that it could produce, for use in powder bags. After the German supply of embroidery cottons had been cut off, Nonotuck added to its products cotton yarn,—skeined, balled and dyed in the Florence mills. The demand for these goods was so great that the mills at times worked until ten and eleven o'clock at night. Even wool yarns were produced for a time here.

The Nonotuck built a hosiery-mill in 1920 and began the manufacture of this product, which was a far different matter from what it was in the 1880s, when the company had first attempted it. At that early date, four or five men had worked laboriously on crude machines to fashion a few silk stockings for what was strictly a luxury trade; now, in 1921, fifty or sixty knitters were said to be averaging five hundred dozen pairs a week, with output still increasing. New machinery was purchased in 1923, at which time the future of hosiery manufacture here still looked most promising.

As we have seen, the McCallum Hosiery Company had opened two new mills during these wartime years. The Belding Company was also expanding. Its capitalization was five million dollars in 1918, and its Northampton plant was producing to capacity, as was the brush company and other local industries, handling large government orders for military supplies.

After the war, industrial output in the Northampton region reflected the ebb and flow of general post-war adjustment. It rose to new heights during the business boom of 1919-20,* only to drop again with the country-wide recession of 1921.

Some industries, including silk, the principal one in the area, which had stepped up production sharply during the war, now faced sudden contraction of markets, as well as the impact of new competition in the field. New silk mills had multiplied in the country during the war, with some four hundred new establishments starting operations in the five years between 1914 and 1919. Compare this with the five hundred fifty for the thirty-five years prior to 1914. Cotton and

* Total value of products of Mill River industries in 1920 totaled $18,500,000,—an all-time high. Of this $11,315,000 was represented by silk products.

rayon were also actively battling for markets. Some cotton manufacturers were putting out silk and mercerized threads which offered serious rivalry to spool silk; while rayon and celanese fabrics were being pushed strongly as silk substitutes.

Merger was one way out for the embattled silk manufacturers. One of these was to take place in Northampton, being one of the first important changes in the industrial scene there since the war. In 1921 the Nonotuck Silk Company, with its several Florence mills, and the Brainerd and Armstrong Company, which owned three plants in Connecticut, culminated their long years of close business association by consolidating to form the Corticelli Silk Company, incorporated in Connecticut. The expediency of such a step, was shortly apparent. One of the first moves of the new company was to discontinue some sizes of sewing-silk and to reduce the number of color shades. The manufacture of cotton thread was also discontinued in 1921, and negotiations were started for the sale of cotton machinery. In 1924 the worsted yarn business was being gradually withdrawn from the market. The firm now began the manufacture of special-purpose silk goods, such as fish line and insulation for electrical fixtures. Experiments to improve the quality of "artificial silk" were being carried on. A rayon thread was also attempted. Silks were being made for knitting and embroidery, and excellent sales were reported for these products.

Through the early 1920s, McCallum's had as many as two hundred "outside workers",—mostly housewives, working part time,—operating out of the company's Springfield branch office alone. These women had learned how to embroider silk stockings,—"clocking" it was called,—and the work paid well although it was rather hard on the eyes at first while learning. When more skill was acquired, "you could almost do it with your eyes closed", as a former McCallum worker here describes it. "The only thing was, you had to count the holes in the stocking fabric carefully as you went along; if you missed one, you had to pull it all out and do it over."

A Springfield lady who was on the staff of McCallum's local branch at this time, recalls having personally taught one hundred fifty women how to do this work. One of the Springfield workers who required little teaching was a Greek woman who had once worked on a robe for the King of Greece while in the "Old Country".

Women could earn as much as thirty-five dollars a week in this manner, which was good money for a spare-time occupation. Some of the de luxe stocking-clocking jobs paid the worker at the rate of five dollars a pair,—for about a day's work. These same stockings would sell for ten dollars. About 1924 McCallum's closed its Springfield branch, by which time the embroidered-stocking fad was well on the wane.

In 1923 it was said that competition in machine-twist was the keenest in years. Other and newer concerns were reported to be inaugurating aggressive under-selling campaigns. Efforts were made,

in which at least one local firm joined, to combat the substitution of mercerized cotton for spool silk.

Advertising was becoming an increasingly important sales medium now. The Nonotuck Company had shown a growing interest in such promotional activity for some years. An appropriation of a few thousand dollars for magazine and trade-journal advertising in 1914 had been increased to many times that amount in 1923.

Silk cabinets were made up for display in schools and shops to show the various stages of silk manufacture. Some of the old Whitmarsh mulberry trees were still being cultivated and cocoons raised for display in these cabinets. A needlework magazine was maintained for several years before the war period. Booklets, style shows, exhibits at the International Silk Exposition,—for a year or two, even a large electric sign on New York's Broadway,—were among the methods used.

By the middle twenties, conditions seem to have improved in the region's silk industry. The Corticelli Silk Company paid regular dividends on both preferred and common stock from 1925 to 1927. All its looms were running, and for a time optimism was quite general, although all the mills were continuing to seek ways and means for decreasing production costs and increasing the number of looms per worker. The Corticelli Company effected economies by consolidating some of its branch offices; the spool shop and lumberyard at Leeds were closed, and so was the iron shop at Florence. Advertising appropriations were cut; automatic gluing machines were purchased for use in reducing labor costs at the box shop; the number of hosiery inspectors was cut; efficiency systems introduced, and so on. The company's boarding houses which had for some years been operated at a loss, were closed in the middle twenties. More than a hundred tenements were still on its hands at this time, some of which had been built in war days to accommodate additions to its labor force at that time.

Some attempts were made from time to time to revive the "community" atmosphere of former days, but met with indifferent success. New welfare plans adopted by the companies after the war seem not to have been greeted by employees with the warmth accorded to earlier activities along such lines, and the welfare workers were often viewed with disapproval, if not outright suspicion. The Corticelli Company had established a central employment office and trained employment personnel to replace the old methods of hiring and firing by individual foremen,—this too seems to have aroused unfavorable reactions among the older employees who saw it as just another unwarranted departure from tried and true methods of the past.

However, for a year or two, dances and sleigh rides were sponsored, parties organized, and recreation rooms decorated, towards the improvement of employer-employee relations. Mills began to introduce cafeterias and to provide free tea and coffee with moderate priced lunches. Motion pictures under mill sponsorship, were for a time given in Florence, Leeds and Haydenville. There was some

unrest among employees under the pressure of new efficiency methods aimed at increased production, as might have been expected,—but they gradually adjusted themselves to the new conditions.

In 1926 the Belding Brothers Company and the Hemingway Silk Company, the latter a seventy-seven-year-old enterprise incorporated in Connecticut, effected a consolidation under the name of the Belding-Hemingway Company, which represented the second sizeable merger among silk firms of the Northampton region since the war.

With the market crash in 1929, business dislocation was, of course, evident everywhere. The next year, the Corticelli Silk Company sold its spun silk department to an outside concern, and stringent economies were again effected. By 1931 the advancing depression was making matters steadily worse for all local firms.

Further important corporate changes were effected among Northampton industries at about this time, two of them involving the silk industry. In 1929 the Propper Silk Hosiery Mills Inc., of Elmhurst and Long Island City, New York, had acquired control of the assets of the McCallum Company. The new organization became the Propper-McCallum Hosiery Company with its headquarters in New York. In 1932 came the most important and significant consolidation, when the Belding-Hemingway Silk Company and the Corticelli Silk Company were merged after a long period of negotiation, and the Belding-Hemingway-Corticelli Company was formed. Corticelli had now became consolidated with the company that had been one of its most formidable competitors.

In 1934 Propper-McCallum sold their wholly-owned Canadian subsidiary, the St. Johns Silk Company, in St. Johns, Quebec.

The peak of industrial production in the Northampton area had been reached between 1917 and 1923. With some fluctuation thereafter, total production declined more and more as time went on. Quite likely the course of Northampton's industrial history, during and after the 1929 depression, would have followed the pattern of other New England textile centers if the textile concerns had continued operation here. However, in 1931 the Belding-Hemingway Company announced that its Northampton plant, which had been running part-time for two years, would be closed for at least six months. It was never to be reopened by this concern. In the following year, with the merger of the Corticelli and Belding-Hemingway companies, the former's Northampton plants were also closed and all manufacturing operations removed to Connecticut.

For two or three years another company known as College Weavers, Inc., carried on the manufacture of rayon, in the Belding-Hemingway plant and it also had a throwing mill in Leeds. That company, however, discontinued manufacturing in 1936, after which both the Belding-Hemingway plant and the old Corticelli mills were idle. With the shutting down of these large silk-mills, along with prior removal or liquidation of the emery wheel concern, the oil stove factory, the basket works and other smaller enterprises the Northampton area suffered greatly. Loss of the silk-mills alone deprived

the region of a good share of its industrial activity, although some of their factory buildings were eventually taken over by other industries while some were torn down.

In more recent years the late George McCallum, son of the founder of the McCallum mill, purchased Propper's controlling interest in the Propper-McCallum Hosiery Company and thus reversing the usual twentieth century trend, the old Northampton family interests have been able to regain control of this firm once more. The corporate name has not been changed however.

In 1936-37 hard times struck the company, and it was forced to borrow money from the Federal government and sell its plants in Philadelphia and Elmhurst, Long Island. By agreement of the government and the owners, Philip J. Farley came in as plant manager, and because of his success in stabilizing the affairs of the company, he has remained. Mr. Farley also became the secretary and treasurer of the corporation. During these lean days, a few years back, McCallum employees, fearing the plant would have to close, leaving them jobless, took a voluntary wage cut, and took stock in the company to help put it on its feet again. Several years later, the union volunteered another reduction in pay, to facilitate the plant's purchase of modern equipment, which they realized was needed to help meet competition and market demands.

The hosiery-mill workers in recent years have gained the advantages of sickness and accident insurance, two weeks vacation with pay, and other benefits of modern industrial employment, in addition to various wage increases. There is also an employees' credit union here.

The firm of Propper-McCallum, with plants on West Street, Northampton, and in Florence producing full-fashioned silk and nylon hosiery, remains as the only silk-processing industry in the area today, and as a symbol of this region's century-long prominence in the field of silk manufacture. McCallum's is, as a matter of fact, Northampton's biggest single industry at present, although silk now plays but a small part in its total production. Such silk as they use, produced in Japan, is purchased from American importing houses which ship it pretested, to the mills in skeins and baled. Revell McCallum, grandson of the original founder of the business, now serves as its president and chairman of the board of directors, with Clarke W. Tobin as vice president, and Philip J. Farley, secretary and treasurer. Directors are Revell McCallum, D. B. Wallace, T. F. Behringer, E. W. McCallum and C. W. Tobin.

A sentimental reminder of the old days has recently disappeared with the razing of the one-time community hall in Florence, which "silk money" had helped to build. Known to everyone in the area as Cosmian Hall, the imposing brick edifice had been presented by the Hill Institute Trustees to the Northampton Community Young Men's Christian Association in 1945, but was found to be structurally unsound for further active use as planned, and the venerable landmark was torn down early in 1948.

Although there are few people now alive who can remember the silk craze, there are still evidences to be found of commercial silk culture, in the scattered stands of mulberry trees that are sprinkled over the Connecticut Valley landscape. Some of these trees date back many years. One of the most impressive mulberry tree plantings to survive until recent years was on Boston Road, Springfield, where a line of them extended along the north side of the highway, spaced about twenty feet apart, from about five hundred feet east of the Boston Road schoolhouse almost to Bay Road. These trees, planted in 1812, during the early days of the "silk craze" were finally cut down in connection with the widening of Boston Road about 1915.

It is worthy of note that popular interest in the subject of silk culture, is far from dead, hereabouts. A New York department store put on a demonstration several years ago to show how easily silk could be produced at home. In its greenhouse annex, a woman spun silk thread from a cocoon, using an old-fashioned spinning wheel, and feminine visitors uttered cries of delight as they saw visions of an opportunity to "grow" their own pure silk hosiery. However this New York establishment, in offering six small mulberry trees, one hundred fifty silkworm eggs and a pamphlet on sericulture to all interested persons, was careful to suggest that the experiment be undertaken merely as a hobby, and warned that anyone thinking of undertaking such a project with serious commercial intent would be better off turning their attention to carrots, beets or onions.

Closer at home, the city of Springfield, largely through the activities of Miss Fannie Stebbins, one-time supervisor of nature study in the Springfield schools, has fostered the planting of mulberry trees on school property and study of sericulture by third and fourth grade school pupils for some years. Miss Stebbins became interested in silk culture after seeing a demonstration of silkworms at work while attending the National Education Association Convention in Los Angeles early in the present century. She had some silkworm eggs forwarded to Springfield at this time, and the worms at first were fed from a large mulberry tree which bordered the East Union Street School property. From time to time, seedlings from this tree were used in the planting of mulberry trees in the yards of virtually every elementary school in the Springfield school system, to facilitate pupils' study of silkworms and their habits. Miss Stebbins has a small silk dress in her possession today, made from Springfield-grown silk and fashioned by school pupils of Miss Carrie Kilburn's one-time household arts classes.

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The following individuals have also provided material aid to this project:

Mrs. Hazel Damon, reference librarian, Forbes Library, Northampton; Mr. Fletcher Prouty, City Forester, Springfield; Miss Dorothy Read, Springfield; and Miss Fannie Stebbins, West Springfield.

CHAPTER XLIV

Four Distinctive Institutions

THE BERKSHIRE HILLS CONFERENCE

By Paul W. Foster

TRADITIONALLY, Berkshire County has been one of the outstanding resort centers of the United States. Favored by nature with low mountain ranges extending its entire length, on the east and west, with the valley of the Housatonic River between, it has attracted visitors from all over the world for more than a century.

More than a century and a half ago the earlier settlers in Connecticut came north into this region because of its fertile valley. Later the New Yorkers crossed the Taconic range to accept grants of land.

These groups came to make homes and till the land but in the years which followed they were joined by those who sought the solace of the hills in relief from the rapidly developing urban centers of New York and New Jersey.

Those vast areas of fertile lands which had attracted the earlier settlers were equally attractive to those who would develop them into magnificent estates. These were augmented by gardens and greenhouses, by the creation of stables and livestock, driving and riding horses and all of the accessories of such properties.

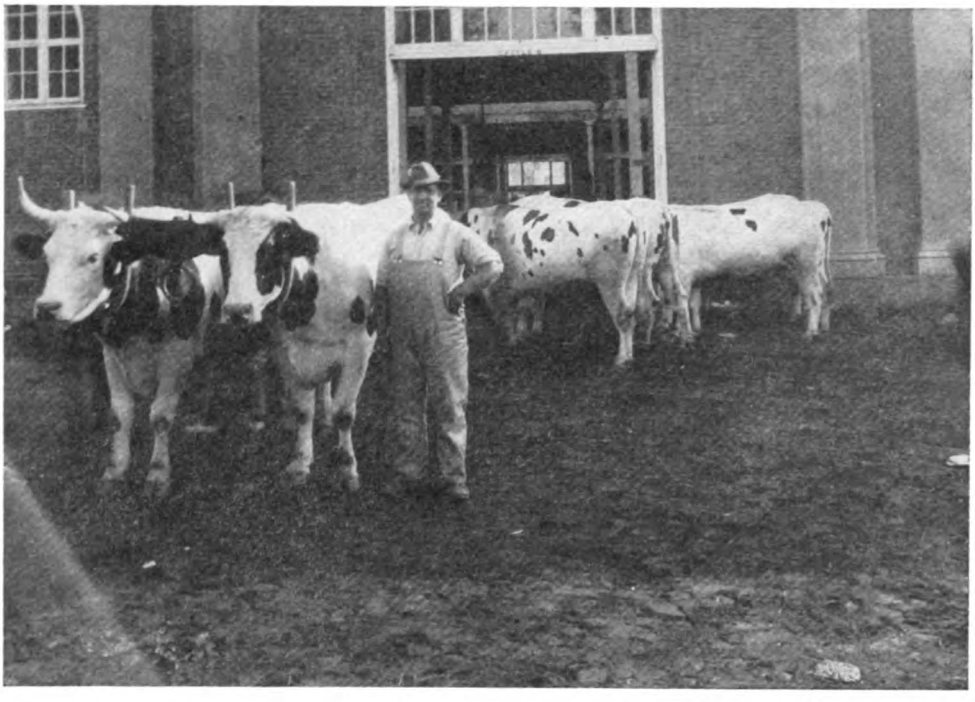
In years the number of these estates increased as did the acquisitions by families of wealth and prominence. Such towns as Lenox, Stockbridge and Williamstown became center of activity in the social world. With the coming of railroads there was a seasonal influx of families from the metropolitan centers and they came for the summer season. The Berkshires rivalled Newport and Bar Harbor in appeal.

Large hotels were built to accommodate those who were not house guests in these palatial homes where entertainment was on a lavish scale from June to October. But there then came a demand for the opening of small farms and private homes, where the city-folk of moderate means could come for a week or longer.

Following the railroads and their improved facilities came the trolley lines which operated from the southermost line of Berkshire County at the Connecticut line to its northerly extremity on the

Vermont line at Williamstown, and even across both state lines into Canaan, Connecticut and Bennington, Vermont.

Visitors from the city viewed the hills, lakes, and streams from the open trolley car and went back to their homes enthusiastic in their praise of everything the Berkshires had to offer. They found opportunities to fish and hunt, to row and sail, always absorbing the natural delights which had awaited them.



(Courtesy of Pioneer Valley Association)

A Few Farmers Still Use Oxen in Pioneer Valley

Pair in foreground won pulling contest at the Eastern States Exposition at West Springfield.

The early twentieth century brought the automobile and soon the village which catered to a hundred "boarders" was entertaining a thousand. They found the beautiful roads off the beaten path which took them to mountain-top lakes and streams which were previously known only to the "natives."

Boards of trade and merchants' associations which had originally been set up in the large towns to bring co-operative effort in the solution of problems among the businessmen themselves, found a need for still greater activity in making known the recreational advantages of their communities to the prospective visitors.

They became chambers of commerce and, almost without exception, devoted a sizeable proportion of their outlays of time and money to bringing in the tourist dollar. Where marble quarries, paper-

making plants and deposits of iron ore and glass-sand had been the chief source of gain, the towns and cities of Berkshire came to the realization that nature had also given them a marketable product of which they had previously little conception.

Some of the local civic organizations risked a paid advertisement or two in the city newspapers proclaiming the particular appeal which they hoped to make. Artists of renown had come in the early days to take back proof of the existence of some beautiful waterfall, some mountainous peak or the inimitable glory of the autumn foliage. When photography attained its early popularity the Berkshires were "made", and when winter sports broke into the pictures in the early days our visitors of the summers before found delight in snowshoeing and tobogganing, and then discovered that skiing was at its best in the Berkshire Hills.

This moderate development of the region bounded on the north by Vermont, on the south by Connecticut and on the west by New York, reached, in the early 1920s such proportions that the recreational business counted its annual returns in the millions of dollars.

About twenty-five years ago the good people of Berkshire saw the necessity of grouping themselves together in some form of organization which would have as its mission the further promotion of this now well-established business on a county-wide basis and, what is perhaps more important, the preservation of the natural advantages without which there would have been no such business.

The county awoke to the fact that while there may never have been another region as attractive and accessible to the centers of population as the Berkshires, there were other places whose people thought they had something comparable. Regional and state organizations had been formed, many of them with almost unlimited funds for exploitation. Competition was becoming as keen in pursuit of the tourist dollar as it was in the sale of merchandise of a more tangible nature.

Largely at the suggestion of some of the chambers of commerce in the county, a group of citizens formed the Berkshire Hills Conference with a membership composed of the county's leading citizen in all walks of life. It was incorporated and within a few years the state legislature gave the county commissioners the right to expend public funds in support of a program of advertising.

On the purely promotional side the organization undertakes an advertising campaign in newspapers, magazines and other media, publishes booklets and maps, and assists in arranging accommodations for people whose interest has been aroused by the advertising.

Fully aware, however, that the presence of the first visitor in those early days was due to the scenic attractiveness of Berkshire which nature had provided and that the preservation of those natural advantages is essential to a continued appeal, the organization devotes much of its effort along these lines. The Conference has had its part in the establishment and maintenance of state parks, in setting aside suitable areas for bird and wild life sanctuaries and for public

and private reservations. It has fought for their retention, unspoiled for the enjoyment of visitors. It has engaged in the task of controlling lumber operations on its hillsides and mountains, and has sought the adoption and enforcement of regulations governing outdoor advertising.

Largely through the aid of the Conference, special groups have been formed to establish a program which has as its ultimate objective the removal of pollution from the county's streams.

All of this activity has been founded upon the realization that only so long as the Berkshires continue to offer the visitors the same appeal which established the area as the foremost recreational section of New England, can it hope to hold its prominence.

Elsewhere in this volume are set forth the varied cultural attractions none of which would have been attracted to Berkshire but for the appeal of its scenic beauty which the Conference proposes to continue to make known to the world, and to preserve for the enjoyment of its people.

The Pioneer Valley Association

By Elisabeth Shoemaker

This resumé was penned on the tenth birthday of the Pioneer Valley Association. During that decade the Valley's national advertising bureau grew from a small beginning, without members or money, to a busy organization with a $40,000 annual budget, and a membership of 2,000 businesses and individuals in the seventy cities and towns in the three counties. Bankers, farmers, retail stores and utilities, chambers of commerce, women's clubs, professors and plumbers belong.

Set up originally to nationally sell the area's tourist advantages, the Association activities were expanded to include the promotion of farm products, and of a vast amount of real estate for summer homes. Lately studies have been undertaken looking to regional industrial promotion.

National advertising on the area's attractions, direct mail, motion pictures, news stories, and exhibits have gone into every state, and to many foreign countries. Thousands of people who never before heard of the region, have written the Association seeking vacation or realty information, and mail from distant states is now received at the headquarters in Northampton every day.

That the effort has succeeded is shown in annual reports. In 1947 nineteen Valley hotels located in the three counties reported that tourists spent nearly three million dollars with them, and accounted for forty-six percent of their business that year.

The original organizing group, all volunteers, announced the area was losing a tremendous income from the great amount of tourist business travelling through and not stopping.

Newspaper clippings of ten years ago quote John W. Haigis of Greenfield as saying "We have everything to offer vacationists, but

we have to advertise to get them." Mr. Haigis, who was chairman of the first fund drive, and later served as the Association's president for five years, used to say that he became interested in this work when, from his office window, he saw vacationists travelling north on Route 5.

The Association's first meeting was held at the Hotel Northampton on November 17, 1938, but it was June before the 2,500 mile area was organized and sold on the new idea. Lewis N. Wiggins called the meeting of leaders from the three counties and described the possibilities of a regional organization. Recently Mr. Wiggins said: "It has developed into all we wanted it to be. I don't see how so much has been accomplished."

The Association's first name was the Western Massachusetts Visitors Association, and A. Gordon Moody of East Northfield was elected the first president. The same year the name Pioneer Valley Association was formally adopted.

All Valley newspapers immediately supported the project. The Springfield newspapers assigned to the first Board, Mrs. Ernestine Perry, who served as secretary. Others on the Board included Samuel U. Streeter, Franklin County Commissioner; Charles DeRose, president of the Northampton Chamber of Commerce; John H. Finn, Northampton; Charles W. Bray, Hampden County Commissioner; and the late Clarence E. Hodgkins, Hampshire County Commissioner, also Adrian Potter who was then secretary of the Convention Bureau of the Springfield Chamber of Commerce. The late Alfred H. Hastings of Springfield was treasurer for three years.

Thirteen thousand dollars for the first year's operation was raised through public subscription, subscribers becoming members of the new Association. Literature, featuring each of the seventy communities, and national advertising appeared in the summer of 1939, and immediately created an impression in outside states. At the 1941 annual meeting Mr. Haigis reported that at least $5,000,000 in new business had been brought to the region in less than two years through the various programs.

That year the Association's membership rose to 1,600, chiefly Valley business concerns, but World War II then curtailed its activities. Restricted programs continued through the war years, considerable work was done in promoting the area's advantages to the thousands of WAVE officers who trained here. A special committee aided small industries in war converting problems and also prepared a regional postwar plan. This plan was presented by Roger L. Putnam of Springfield to the Massachusetts Association of Planning Boards' annual meeting held in Holyoke.

At the war's end, the Association had ready a postwar plan and Edwin W. Smith of Westfield, Commissioner of Barnes Airport, then president, revived the Association's standing committees on which one hundred five Valley men and women now serve. One of the most active of these is the Conservation Committee of which Thomas J. Costello, former Hampden County Commissioner is chairman.

In 1946 Valley agricultural leaders asked the Association to prepare a plan to promote farm products. Twenty agricultural authorities, including Prof. Grant B. Snyder of the University of Massachusetts and the leading produce associations, last spring approved an extensive program, which according to the Association's Agricultural Committee chairman, Louis Pelissier of Northampton,

Typical Massachusetts Auction Scene. This is in Berkshire County

will be underway "in 1949 when the farmers surely will need product promotion."

At the 1947 annual meeting, George V. Wallace, Jr., of Holyoke was elected president and said the basis of his acceptance would be the inclusion of industrial promotion in the Association work. Wallace immediately appointed an Industrial Committee that, among other activities, last June, made the first partial area survey on available industrial space. Mr. Wallace, who was re-elected that year, also set up an executive committee representing each of the seventy cities and towns to work on a variety of area problems having to do with tourist and allied subjects. This committee met three times in 1948.

Ten years ago the first board interviewed a number of applicants for the position of the Association's executive director and finally

offered the position to Miss Elisabeth Shoemaker on the basis of her experience doing similar work for the one hundred thirty-six towns and villages on Cape Cod. Miss Shoemaker has been with the Association ever since, except for a brief absence during the war when she managed an exposition and convention for the National Association of Home Builders. Her work has been recognized by several national awards and in appointments to regional and national organizations in the tourist promotion field. She visited Florida as a discussion leader at the annual meeting of the National Association of Travel Officials.

Six persons trained in promotion comprise the Pioneer Valley Association permanent staff. Northampton was selected as headquarters because it is almost exactly in the center of Pioneer Valley. Other 1948 officers are: George V. Wallace, Jr., Holyoke, president, Hadley Falls Trust Company, president; Franklin County: Clifford Clark, Turners Falls, assistant to the president, Western Massachusetts Electric Company, vice president; Charles Fairhurst, Greenfield, Justice, Superior Court, director; Hampshire County: Harold L. Ames, Northampton, cashier, First National Bank, treasurer; William H. Baker, Jr., Chesterfield, postmaster, vice president; Dr. Hugh P. Baker, Amherst, president-emeritus, University of Massachusetts, director; Hampden County: Roger L. Putnam, Springfield, chairman of the board, Package Machinery Company, vice president; Edwin W. Smith, Westfield, Commissioner, Barnes Airport, director; A. B. Wallace, III, Springfield, vice president, Consolidated Dry Goods Co., secretary; Elisabeth Shoemaker, Ashfield, executive director.

Jacob's Pillow

By Ted Shawn

Sometime between 1790 and 1800, five families moved northward from Connecticut and settled on the side of the mountain later to be known as "Jacob's Ladder" in the southern part of the Berkshire Hills. The Carter family built the house, which afterwards was named "Jacob's Pillow". For a hundred years various generations of the Carter family lived in this house, reared families, and the sons built houses nearby when they married, and thus there grew a patriarchal community spread over some eight hundred acres. The land was cleared, the forests cut, the soil cultivated, cattle raised, a blacksmith shop established,—in fact, like all rural pioneer American families, the Carters supported themselves entirely from the land, even carding wool from their own sheep, spinning the thread and weaving their own homespun clothes.

I have an account book for the years 1837 through 1846 of Stephen W. Carter. Men who worked for him were paid in lumber, blacksmith work, a side of bacon, and other barter goods,—and one account covering two whole years between Carter and one of his "hands" was finally closed out by the exchange of twenty-six cents in

cash. Now and then the Carters boarded a state pauper for which the Commonwealth paid them the lavish sum of six cents a day!

This Stephen Carter, and each succeeding head of the family, was a man of substance, dignity and importance—town and county and state officials, a justice of the peace (an old couple visited me on their golden wedding anniversary a few years ago, who had been married by Judge Carter in this house). It was perhaps this same Stephen W. Carter, or his son, who was an active abolitionist, and his great grandson told me that Jacob's Pillow was one station on the "underground railway" for years before the Civil War, the route by which runaway Negro slaves were spirited into Canada and freedom.

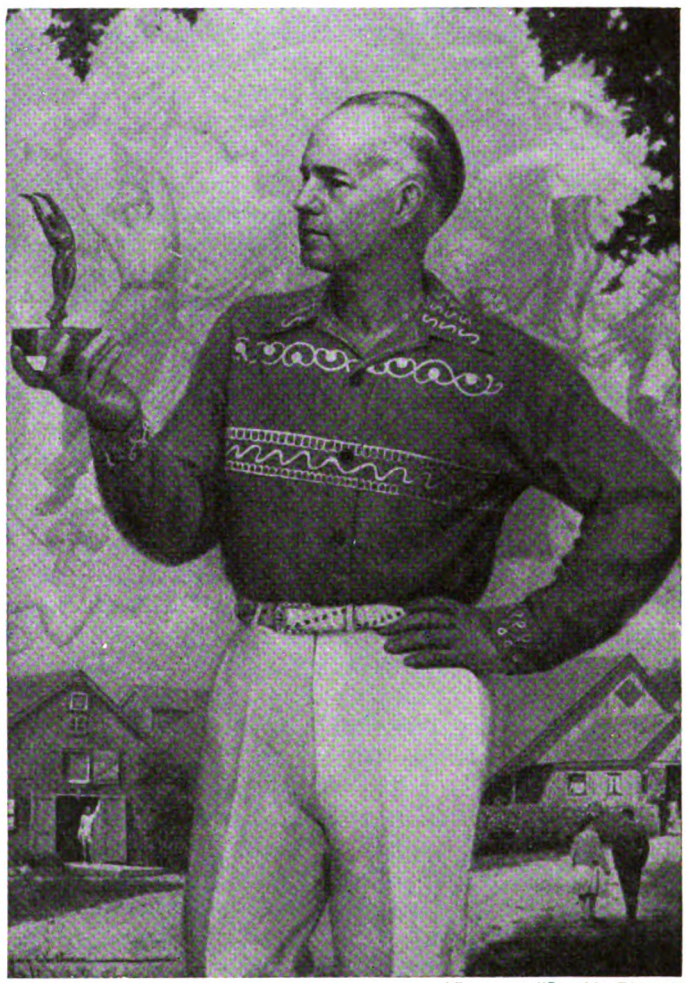
Along about 1900, the Carter family having scattered, Jacob's Pillow was sold to Arthur E. Morgan, a famous hydraulic engineer; later to become president of Antioch College, and still later, for a short period, head of the Tennessee Valley Authority. Mr. and Mrs. Morgan spent many summers at Jacob's Pillow while their children were young. But by 1930, the children being grown, they had not opened the house for five years and had put it on sale.

At this time, for three years I had had a summer school at Westport, Connecticut, but had increasingly desired more space than the one acre I had there on the bank of the Saugatuck,—and also to be farther from New York and the consequent unbroken stream of visitors. For years I had visited for a weekend each summer that I was in the East, my good friends Mr. and Mrs. Goddard Dubois at their "Forest Farm", eighteen miles from Jacob's Pillow, near Winsted, Connecticut. Their son, Goddard, Jr., in 1930 was attending Antioch College and they knew about Jacob's Pillow from Dr. Morgan and that it was for sale, so we made an excursion to examine the place. Immediately I fell in love with it, paid a deposit on an option, then placed my Westport property in the hands of real estate dealers for sale. By good luck, it was sold within six months and I used that money to complete the purchase of the one hundred fifty acres, house and barns of Jacob's Pillow.

While I dashed up now and then for a weekend picnic, it was not until the fall of 1931 that I actually began to live in the house. When I first saw Jacob's Pillow it was overgrown with weeds and brambles, the house had not been painted for five years, the barn doors were falling off their hinges, the inside of the biggest barn had a floor of earth and boulders, haymow and cattle stalls as when they had last housed stock.

During the summer of 1931, I had Mr. Malm of New Boston, Massachusetts, convert the biggest of the three barns into a studio,—new doors, big studio windows, a hard maple floor, the walls lined with "sheet rock", and I moved up the big mirrors and ballet bars from the Westport studio. My friend, Mrs. Eugene R. Cox, gave me the grand piano from her home which she was then breaking up after the death of her husband.

Having taught at the Denishawn School in New York, and produced *Job* at the Lewisohn Stadium the summer of 1931, that September, I came to Jacob's Pillow, with my pianist, my secretary, who for many years was manager of the Denishawn Schools, and four of



(Courtesy "Jacob's Pillow")

Ted Shawn

the young men who had appeared in the stadium *Job* ballet: Barton Mumaw, Jack Cole, Harry Joyce and Don Moreno. We worked on the place, cutting weeds, carpentering and painting for some weeks, and then we were joined by my entire professional touring company, and the program for that winter's tour was rehearsed and some of it created in the barn studio.

After that 1931-32 tour, I returned to Jacob's Pillow with mostly the same personnel, ranging out to give summer performances in Stockbridge, Peterborough, Falmouth, etc. That fall (1932) because

I was working towards the revolutionary idea of an all men's group of dancers, I went to Springfield College, Springfield, Massachusetts, accompanied by Miss Lyon, Miss Campbell, Barton Mumaw and Frank Overlees (who had just begun to study with me) and taught some five hundred young physical education men in that college all winter. In the spring of 1933 I gave, in Boston, the historic first performance,—in which a full evening's professional dance program was given entirely by men dancers. Heartened by the response of public and critics, I made the decision to form the men's group and tour for some years exclusively with male athlete-dancers.

In the late spring of 1933, after the season in Boston, I dashed down to San Antonio, Texas, to give my *Cosmic Dance of Siva* for the Festival of San Jacinto. On the way, we stopped in Arkansas City, Kansas, to visit Ernestine Day, formerly leading solo dancer in my company, and through her heard a young pianist, Jess Meeker, play his own compositions. Mary Campbell had a profound conviction that for the men's group I had finally decided upon, I should have a man pianist and a composer who could write music for many projected choreographic works, which up to then I had been unable to do, as special music had to be composed. So I engaged Jess Meeker, who came to Jacob's Pillow and was for seven years accompanist for me and the men's group, and the composer of practically all of the many new works I created in those seven years.

Another Arkansas City boy, Dennis Landers, also came on to join Barton Mumaw, Frank Overlees and Wilbur McCormack (whom I had recruited from Springfield College). These four, with George Horn and George Gloss were the six first members of the to-be-famous Shawn's Men Dancers.

Except for a cook, the boys and I did all the work on the farm, cut wood, raised vegetables, did carpentering, stone masonry,—improving and adding to the existing buildings (the boys each, through the years, built his own cabin). That first summer we were quite isolated and undisturbed, as no publicity had attended my buying and living at Jacob's Pillow up to that time (I, naïfly, thinking it would always be used as a "retreat").

But my friend, F. Cowles Strickland, director for its first eight years of the Berkshire Playhouse at Stockbridge, twelve miles away, hunted me out and watched rehearsals frequently, and asked innumerable questions, to which I tried to give intelligent answers, and when words failed, demonstrated with the boys. It was he who conceived the idea of the "tea-lecture-demonstrations" which ultimately became one of the outstanding cultural features of the Berkshires.

My idea of the men's group was so radical and unprecedented that all booking agents and concert managers with whom I had previously done business, would have nothing to do with it,—saying that it was an interesting theory, but totally impractical. So George Gloss and Margerie Lyon, neither of whom had done any booking, but who believed profoundly in the rightness of my idea, each having a car, started out to book. Gloss, as a dancer in the group, was

replaced briefly by Willard van Simons who was studying with me at the time, but by Christmas he in turn was replaced by Fred Hearn who auditioned for me in Asheville, North Carolina, when we performed there that fall.

We started out in October, 1933, never knowing more than a few weeks ahead whether we would eat or not. But plus the grand job of booking that Mr. Gloss (later Dr. Gloss of Louisiana State University, and later Lieutenant Gloss of the United States Navy) and Miss Lyon did, the success of the performances spread, and we ended up that first tour of 1933-4 with a record of one hundred eleven performances danced,—a record never equalled before nor since by any group of American dancers except the old Denishawn company.

In the summer of 1934 we built on an addition to the barn studio to take care of the ever increasing crowds attending our Friday programs, and eventually had to add a Saturday performance each week also,—and still turned people away. These programs were the precursors of the "dance festivals" of the years 1940 and on. The tour of 1934-35 included one hundred twenty-five performances, including an unusually high number of return engagements. In May and June, 1935, I took the men's group to London. Miss Fern Helscher, an old friend of mine, a newspaper woman from Corpus Christi, Texas, had joined our organization as advance press agent in January, 1935, and she went ahead and negotiated the London contract with my previous London managers,—Daniel Mayer, Ltd. A season of special matinees at His Majesty's Theatre, followed by a legitimate run at the Apollo Theatre, was a smash success.

We returned to Jacob's Pillow and bought an adjoining fifty-five acres and four buildings and from that summer on, conducted a school for men dancers, having each summer some forty resident men students.

With ever lengthening United States tours (including Cuba and Canada) and ever growing activity at Jacob's Pillow in the summers, the group continued until May, 1940. In the fall of 1939, I had decided that my battle was won,—the rightful place for the dance as a legitimate and dignified career for men was established,—and I was eager to push on to still newer projects. My men were now full-fledged solo artists and ready for individual careers, and so I publicly announced in October, 1939, that the forthcoming tour would be the last. After our most magnificent tour we closed May 7-8th in Boston (where the first performance of the men's group had been given in April, 1933) with two memorable and sold out performances at Symphony Hall, having given over 1,250 performances in over 750 different cities,—and we had written a significant chapter in the history of the American dance.

Creatively and artistically, the seven years' achievement of the men dancers, gave me a deep inner satisfaction. But financially, since I never had a cent given me outright as endowment or underwriting, I went deeper and deeper in debt those seven years. I supported the whole company fifty-two weeks in the year,—full salary

on tour, and living plus cash allowance from the end of one tour until the beginning of another. Besides this I paid all of the boys' doctor's bills, dentist bills, etc., and at the dissolution of the group, I gave each man a bonus of fifty dollars for every year he had been with me. As a result, I seemed to have no choice but sell Jacob's Pillow, pay off my debts incurred on the operation of the men's group,—and at least, even with the ground,—start fresh.

Miss Mary Washington Ball, associate professor in physical education at the State Normal School in Cortland, New York, was eager to buy Jacob's Pillow, but unable to buy outright, she leased the whole place, completely furnished and equipped, with option to buy. She called her school "The Jacob's Pillow School of the Dance" and conducted the first series of dance festivals based on the plan of bringing, on successive weeks, the outstanding representatives of the different phases of the dance.

Failure of promised financial backing, made it impossible for Miss Ball to take up her option,—and Jacob's Pillow came back on my hands. Although she was unable to go on with her plans for a permanent school and festival, Miss Ball contributed a significant and admirable chapter to the history of Jacob's Pillow as a cultural center and force.

Again I listed Jacob's Pillow with the real estate dealers, and spent the winter in New York. During that winter I again had an offer of a summer's rental with option to buy. The lessee this time was Mr. Reginald Wright, English patron of the arts and balletomane, who wanted Jacob's Pillow for his friend, the great ballerina Alicia Markova, as a place for her summer vacation. As it was late in the season, and no outright buyer had appeared on the scene, I thought it wise to rent Jacob's Pillow again.

Alicia Markova made an arrangement with her former partner in the Dolin-Markova Ballet, Mr. Anton Dolin, to act as artistic director, and they planned to conduct a school and a festival series along the general lines established by Miss Ball. I was asked to be on their faculty for four weeks and to give one of the weekly festival programs,—which I accepted.

The summer of 1941 at Jacob's Pillow was gala. It was the last summer before America entered the war,—everyone had plenty of gas and tires, no restrictions on travel,—and offering big names on each program, the "International Dance Festival" drew the same big crowds that I had drawn with the men's group—in fact the gross of the summer as a whole completely broke the record.

Nine programs were announced, with two performances of each program, Friday and Saturday matinee.

In 1942 Markova and Dolin did the best they could to make a complete theater out of the studio on performance days. Heavy material was hung over the windows and doors, obliterating all daylight (and most of the fresh air) and a front curtain was introduced for the first time, and full theatrical lighting for all performances. The result was that the studio became almost insufferably hot and

stuffy, and the audience, being on a flat floor and on the same level as the dancers, only the first two rows could see the feet of the dancers. Having been the director of Jacob's Pillow for many years, and knowing nine-tenths of the regular audience, I spent a good deal of time listening to complaints about the changed conditions,—most of my faithful followers of past years resenting the heat, the lack of air in the closed studio,—and now that a professional theatrical atmosphere had been introduced and full theatrical prices charged, they resented not being able to see the performers properly. Many of them begged me not to sell, or even to continue to rent Jacob's Pillow, but once more conduct the summer seasons myself. To each I patiently explained my financial situation, and that it was necessary to sell in the absence of financial support that would enable me to run the place myself along the lines that they were used to, and wanted to have again.

(Courtesy "Jacob's Pillow")

La Meri

Finally, when the summer was over, and the option to buy had expired without being exercised, on October 9, 1941, at the home of Mrs. Norval H. Busey, Jr., a group of Berkshire people and Mr. Reginald Wright met to talk with me about a plan they had formed to put Jacob's Pillow on a basis similar to the Berkshire Symphonic Festival. This plan was that a new, non-profit-making, artistic and educational corporation be formed by them which would buy the property from me, and build a proper dance festival theater so that dance artists could have ideal conditions in which to see it. They asked me whether, if this was done and the corporation engaged me as managing director, I would consent to stay on and conduct school and festivals at Jacob's Pillow. After talking to them seriously, to be sure they were aware of the responsibilities they were assuming, and being assured that they would see the project through, I consented. A charter was applied for and granted by the Commonwealth of Massachusetts to the Jacob's Pillow Dance Festival,

Incorporated. The first members of the board of directors included: Mr. Reginald Wright, president; Mr. Frank Diamond, treasurer; Mrs. Eric F. Joslin, secretary; Mrs. Norval H. Busey, Jr., Miss Annabelle Terrell, Mrs. Henry Wilds Smith, and Mr. Joseph Franz, the famous architect-engineer who had built the Music Shed at Tanglewood for the Berkshire Symphonic Festival. They set out immediately to raise the necessary $50,000 to buy the property and build the theater. By November sufficient funds were in hand to justify putting in the concrete foundations. On December 7th, came Pearl Harbor.

(Courtesy "Jacob's Pillow")

Ruth Page

The board of directors of Jacob's Pillow Dance Festival, Inc., met a few days after that fateful December 7, 1941, and wrote me in Florida that they felt they should push harder on the money-raising campaign and work faster to get the theater finished.

Early in April, with snow still on the ground, construction began on the theater building (the concrete foundations having been completed in November) and on April 27th I arrived at "The Pillow" to supervise and increase the dormitory accommodations and remodel one barn into a school office, canteen and students' post office, and "tea kitchen" from which audiences were to be served before performances. I arrived in time to see the big trusses erected,—and from then on watched eagerly each step of the construction. The great beams which span the auditorium were the work of Warren Davis, a seventy-four-year old Negro who chose the trees himself on Lebanon mountain, felled them, and hand-hewed each beam from one huge fallen tree.

Joseph Franz, architect of the theater and member of our board of directors, hovered over the construction of the theater like a mother hen with one chick,—and there was no detail too small to escape his eye. He performed many a miracle, as priorities and scarcities already had made some of the materials originally counted on, unavailable.

Mr. Franz designed (inspired by a photograph of Barton Mumaw in his dance to the *Bourree from the 2nd Violin Sonata* of Bach) and made with his own hands, a beautiful weathervane to top the cupola of the theater; and made the antique style lantern which hangs over the door. And in the last hectic days before the opening, when it looked as if we could not possibly get everything done by the time we were scheduled to give the first performance, Mrs. Franz came over and stencilled the seat numbers on every one of the five hundred fourteen blue metal chairs for the auditorium. Dr. and Mrs. Walter J. Bryans gave us the big, old bell which now rings to let the audience know the performance is about to begin.

When the date arrived when, in the contractor's agreement, the theater was to have been finished, I gave a party for all of the workmen who had taken such an intense pride in this job. Actually, they worked not only up to the arrival of the first audience, but for many weeks afterwards finishing up details.

In the meantime, we had used up cash contributions as fast as they came in, to pay for materials and labor,—but when we saw that the contributions were not coming in fast enough to pay cash for the whole theater by opening date,—the board negotiated a bank loan sufficient to pay the balance; I agreeing to take a second mortgage on the property to allow the bank to have the first mortgage,—(as nothing had been yet paid to me), since obviously the theater had to be paid for first, and built, or we would not have been able to operate on the new basis.

On May 22nd, another blow fell,—gas rationing came into effect on that date for all Atlantic Coast states. My budget had been very carefully planned on the basis of actual receipts from performances in past years at Jacob's Pillow. Although the seating capacity was now doubled, and we had announced twice the number of weekly performances, giving us a potential four times the gross receipts formerly possible,—I had held operating costs down to one-fourth of that maximum possible gross. But gas rationing meant that we could not count on even that. So I called a board meeting early in June and told the board that in view of the gas situation, my previously submitted budget was not worth the paper it was written on,—and I put it up to them to call the whole thing off,—or else be prepared to meet a deficit of approximately $3,000 on the summer. After thorough consideration, they voted unanimously to go ahead and they would assume the responsibility of meeting the deficit.

The last days of June and the first nine days of July were increasingly hectic,—staff and scholarship students arriving first, then the faculty and regular students, then Agnes de Mille came with her group to begin re-creating and producing her American ballet *Hell on Wheels* which was to be the finale of our opening program. Music and carpenters' hammering wrestled with each other for victory.

Frank Overlees was frantically installing pulleys and ropes and scenery, and stage lighting equipment, as fast as the carpenters' work allowed him to do so. Finally, by the night of July 7th, the varnish

on the stage floor being dry, I dedicated the theater by dancing, first *The Doxology* and then my *Four Dances Based on American Folk Music* to an audience composed only of staff, faculty and students. And immediately following that half-hour period, Agnes de Mille went into a lighting and dress rehearsal on her ballet.

The day of the opening was a veritable madhouse,—with carpenters working against time, pupils picking up scrap lumber, bits of shingles and shavings; Fern Helscher installing paper towels, fixtures and toilet paper in the public rooms. Joseph Franz and I mixing mud and cinders and tamping them down in front of the entrance to the theater; tea was being prepared, tea tables set on the terrace; and performers were trying to makeup and get ready in dressing rooms still occupied by carpenters. But by 4 P. M. of July 9th, all was (relatively speaking) in readiness, and the first audience began to arrive,—small, but distinguished, and eager and enthusiastic.

The series was planned around one central theme: *The American Dance,* and showed through the various programs all of the source material and influences that have enriched the American Dance, and then the various generations of the foremost American dancers and their creations that have made up the bulk of America's contribution to the dance. In some cases, such as Argentinita and La Meri, four different programs were given,—but generally each week all four performances were of the same program given on Thursday. There were matinees on Thursday, Friday and Saturday, and a Saturday night performance.

It was, altogether, a memorable summer. The school was full to running over, and for lack of housing accommodations, at the peak of the summer, pupils had to be turned away. And in spite of gas rationing, nearly 5,000 people attended the programs in the theater. The deficit was, however, the $3,000 that I had estimated.

As soon as the last festival program was over, twelve members of the Junior Programs Company arrived and stayed at Jacob's Pillow for a week, and for them I created the dances for *Doodle Dandy, U. S. A.* (with Sam Steen, the youngest member of my men's group in the title role) which they performed all over the United States the season of 1942-3 with great success.

I had contracted for a solo tour for the fall of 1942, but war conditions made it advisable to postpone this tour until spring. Therefore, I went down to Keesler Field, at Biloxi, Mississippi, and jointly with Barton Mumaw (later sergeant in the Air Force Technical Training Command) did a series of six benefit performances, the proceeds of which were enough to pay completely for the erection of a new building at the Field, a reception cottage much needed as a place where soldiers about to be shipped could say goodbye to wives, mothers and sweethearts in comfort and privacy. Following these dance recital benefits, I took over direction of a big musical show, *High Flight,* the cast being composed of one hundred Keesler Field soldiers. Then in January, I went to Cuba for a series of perform-

ances in Havana and Santiago de Cuba, and on up to New York to plan what could be done at Jacob's Pillow for the summer of 1943.

Realizing that with the ban on pleasure driving added to previous gas rationing, it would be impossible to do a large-scale festival, I arranged an artist-faculty for the school who could also provide one weekly program in the theater,—mainly for the benefit of the students. And in my budget I made no provision for expenditures on the theater, nor counted upon any income from the theater. But I saw no reason why the school should not go on. So I submitted my plans to the Board of Directors, and left New York with Mary Campbell in early March for my solo tour (which because of war conditions cost me more to play than I took in!).

While I was on tour the board sent me a very depressing letter: contributions had been so few and so slow that last summer's deficit had been only partially liquidated,—monthly payments to the bank on the first mortgage were six months behind, 1942 real estate taxes had not been paid; the announcement had just been made that the music school at Tanglewood was not going to open, and that the Drama School of the Berkshire Playhouse would be closed for the first time in seventeen years,—and hadn't we also better close for the duration! It was even hinted that the whole project of Jacob's Pillow might have to be abandoned and put into the hands of a receiver!

My own deep, strong conviction was that Jacob's Pillow has a great and necessary work to do,—and in its physical fitness program, a work that was of direct value to the war effort,—and that we must carry on no matter what the difficulties. I stated this conviction in a letter sent to each member of the board. Mrs. Busey and Mrs. Joslin rallied to my support and got out and raised enough money to pay the taxes and overdue payments on the first mortgage, and so got us out of immediate danger. However, I was given to understand that if I did open Jacob's Pillow the summer of 1943, it would be on my own responsibility, as no responsibility for a deficit could be assumed by the board. I took the risk, and decided to go on with the school, and one performance a week in the theater as planned.

With practically no help, singlehanded, I came up to the Pillow and got the place ready (the usual burden of cleaning, repairing, etc., being further complicated by the tragic wreckage of trees from the worst ice storm in history) and on July tenth we gave our first performance in the theater to a handful of loyal souls,—and since we could not get a full-sized audience in our own theater, we repeated the program that night at the Curtis Hotel in Lenox, for the benefit of the operating cost of Jacob's Pillow, to a crowded house.

On VE day, May, 1945, I arrived at Jacob's Pillow to open up the place for the fourth wartime summer. The conditions were unchanged, except that there was hope in the air that the war would soon be over. However, all the drudgery of the preceding years, the same lack of help, still obtained. The artists that summer were still giving their services free for the performances and that is why I appeared on practically every program to provide a third of the

running time, as it was difficult to get free artists to fill each entire bill. However, due to restrictions on pleasure driving being removed, we had bigger audiences, and the school was full to running over all summer. VJ day came, and when the official news came over the radio I rang the big bell outside the theater and we called off classes for that whole day. Due to slightly increased theater revenue, and Fern Helscher's efficient business management we came out at the end of the summer of 1945 with all bills paid, and had made many minor improvements to the property, buildings and equipment.

(Courtesy "Jacob's Pillow")

Natalie Krassovska

After the place was closed in the fall, I began talks with Mr. and Mrs. Russell Chapin, which eventually resulted in our announcing the new department of Opera and Opera Ballet for the summer of 1946. Mr. Chapin came onto our board of directors, and at Christmas time, due to illness of Edward T. Clark, Mr. Chapin took over the job of president of the Jacob's Pillow board. Knowing that we were now facing the first peacetime summer at Jacob's Pillow, with far greater demand for student space, and normal audiences once more in the theater,—I spent most of the winter of 1945-46 working and planning for the onslaught. We enlarged our board of directors, and planned a series of benefit performances all over the country. Barton Mumaw got back from his tour of duty in the Air Force in England, and received his discharge about February first. We went immediately down to his home and my studio at Eustis, Florida.

For several weeks thereafter we worked hard and long every day getting him back in condition technically. Then we set out on a tour of benefit performances to raise money for Jacob's Pillow. Some of these were lectures only, showing John Lindquist's kodachromes. Barton drove the station wagon and operated the projector, while I lectured. We completed this series about May first, and spent a week in New York completing arrangements for the summer season at the Pillow. The benefits had raised money, which augmented by other gifts, financed two much-needed improvements at the Pillow,—

increased parking space for the theater, and an augmented water system.

I had thought that with the war over, there would be more male help available. But it was not so. Barton and I arrived alone to start the dreary drudgery of opening up, cleaning, doing necessary repairs. We were joined by one scholarship boy and for the first three weeks the three of us, mostly in pouring rain, worked from dawn until after dark, seven days a week. George Horn came up from Springfield weekends, and his help was invaluable. Knowing what an onslaught of students and audiences the first peacetime summer would bring, I was under terrific pressure to get ready to take care of them all. I was able to rent the Greenwater Lodge, three miles away, unfurnished,—and bought army surplus beds, mattresses, etc., to make a dormitory out of that (and had to charter a school bus for the summer to shuttle the students back and forth). The outside platform, in the "tea yard" had rotted and buckled until it was entirely unusable; this we tore up and carted away (in three days of ceaseless rain) and then with new stringers and heavy tank cedar planks, we built an entirely new platform. Also we doubled the size of the students' shower room and built cubicles for the four new toilets.

By July first, when the school and theater season started, I had lost 23 pounds in weight, had dangerously low blood pressure and low haemoglobin count. My doctor wanted to put me in the hospital for at least a couple of weeks,—but that was impossible, for I had to direct the whole enterprise, teach two classes every day, create and rehearse ballets for the theater programs,—and so I went on.

We had eighty-eight people sleeping and eating on the place regularly, two classes simultaneously going on all day long,—and in the theater, seven days a week, either a dress rehearsal or performance and often both. I also learned, rehearsed and performed the speaking role of the Pasha Selim in Mozart's *Abduction from the Seraglio,* besides dancing on four of the dance festival programs. And, for the first time since the theater was built, we had sold-out houses, the whole five hundred fourteen seats being filled.

By the end of the summer I told the board of directors they would either have to grant me a year's leave of absence or accept my resignation completely, so they granted me a "sabbatical year." I had thought the four war years, struggling to keep Jacob's Pillow alive and going, were hard,—but the first peacetime summer was infinitely worse on me,—although tremendously successful in every other way.

In 1946, after completing the five-year contract with Jacob's Pillow Dance Festival, Inc., I accepted a contract to lecture, teach, and perform in Australia. The board of directors selected others to conduct the 1947 season, which ended with a financial loss. Hence, the board cabled me in Australia, asking that I resume the directorship. After my return I met with the members of the board and asked that as a preliminary to all negotiations, I be relieved of all future business and financial responsibility, leaving me free to devote

my time wholly to the educational and artistic phases of the project. A contract was concluded on these terms and a business manager engaged. In 1946, when I was business head as well as artistic head, the season ended with all bills paid plus a surplus sufficient to care for the annual overhead. Yet, at the close of this season of 1947, in spite of a far greater gross income, the new business manager reported a deficit of about two thousand dollars.

While I was in Australia, the administrators of Jacob's Pillow permitted the town of Becket to seize the property for unpaid taxes, which had been a subject of controversy for years, we maintaining that as an educational institution this was exempt from taxation as was the Berkshire Playhouse or the Music Festival at Tanglewood. At the time I left for Australia there were in the bank sufficient funds to pay the taxes in full, but the president of our board contended that such action would prejudice the case and perferred to submit to the tax seizure. On my return, due to 1947 deficits, there was no longer any reserve with which to pay the taxes and get a redemption deed. Legally we had until April, 1949, to pay the taxes and get the property cleared of claims. It was our reasonable expectation, based on past experience, that with an able manager in charge that 1948 would show a profit greater than in 1946, and so would provide funds sufficient to clear up the tax situation.

In August, 1948, the bank informed us that the bank examiner demanded of them that they force us to pay the tax bill in full at once or else pay the taxes and foreclose on the property. I inquired of the business manager as to how much profit he expected to have at the end of the season and learned that nothing but a deficit was in sight. Thereafter, through appeals for contributions from friends and devotees, enough was received in gifts and pledges to induce the bank to defer action for sixty days. In the interim, a number of benefit performances were arranged. A group of famous dancers, who believed in the work, gave their services without remuneration and it was believed that with full houses, sufficient funds would be forthcoming so that all outstanding bills could be paid in full.

Such was the story of Jacob's Pillow as related by its creator, who, from its inception had been the presiding genius. Year after year his shoulders had carried the burden of the entire project. Not only had he provided the artistry and beauty so vital to its existence, but he was also expected to meet the bills, including those due to other people's errors. During most of the period he had operated the equivalent of a sizeable hotel.

Small wonder that the ends sometimes failed to meet.

As this volume goes to press it is the consensus, among those in a position to be cognizant of the situation, that an enterprise of such interest and value to the community as a whole would never be allowed to pass out of existence and those most interested contemplate the future with confidence.*

* A newspaper article, which appears as this page goes to press, indicates that continuance of Jacob's Pillow is assured for the 1949 season.

TANGLEWOOD*

By Joseph Franz
Member of Board of Trustees
and
Architect of the Music Shed

In the summer of 1934 Dr. Henry Hadley, a famous conductor and composer, on one of his many visits to the Berkshire Hills, conceived the idea of a Berkshire Music Festival. He was inspired perhaps by the outstanding cultural development of an area rich in such associations for many years. From the towering heights of Greylock on the north to its sister peak, Mount Everett, on the south, and from the rugged Hoosacs which march along its eastern border to the Taconic skyline on the west, the region is filled with shrines of beauty, literature, art, music, history and intensive education. Hardly a town can be mentioned that does not hold rich heritage from out the storied past to glorify its name and to interest those who come from other parts to visit the Berkshire Hills.

From 1850 to the present day, such names as Longfellow, Hawthorne, William Cullen Bryant, Herman Melville, Oliver Wendell Holmes, Josh Billings, Channing, Beecher, Stowe, Lowell, Ian MacLaren, G. P. R. James, Mark Hopkins, Jonathan Edwards, Colonel H. W. Dwight, Cyrus W. Field, Rev. David Dudley Field, Joseph Hodges Choate, William Stanley, Daniel Chester French, Augustus Lukeman, Susan B. Anthony, Theodore Sedgwick, Chauncey Depew, George Westinghouse and many others have been closely associated with the Berkshires. A list of more recent residents would include Walter Pritchard Eaton, Adolph A. Berle, Lyman Beecher Stowe, Dr. Raymond Leslie Buell, Norman H. Davis, Sidney Howard, Edna St. Vincent Millay, Albert Spalding, James W. Johnson, Robert Ernest Sherwood, Ted Shawn, Henry Hudson Kitson, Albert Sterner, Dr. Serge Koussevitzky and many other notables all of whom have left or are leaving their lasting impressions with us. Profoundly impressed by the beautiful nature of the Berkshire country and its rich background of tradition, Dr. Henry Hadley chose it for a festival setting. He proposed the festival plan to Miss Gertrude Robinson Smith, a charming personality and patroness of the arts, who, in turn agreed, with Owen Johnson and other leading citizens of New England interested in furthering the Berkshire Hills as an art center, to sponsor the musical fete.

The first officers of the Berkshire Festival organization were Mrs. Elizabeth Sprague Coolidge (founder of South Mountain Chamber Music) as honorary president, Miss Gertrude Robinson Smith, president, Mrs. Carlos M. de Heredia, Norval H. Busey, Jr., Owen Johnson and Miss Mabel Choate, vice presidents, George Edman, clerk, and

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John C. Lynch, treasurer. Committees were formed in various towns, meetings were held, and the idea of "Music under the Moon" was successfully sold to the public.

With the groundwork for a music festival laid, the next move was taken by Dr. Henry Hadley, the conductor of the artistic project. Dr. Hadley immediately assembled an orchestra of sixty-five players from the New York Philharmonic Symphony and started the musical ball rolling. To house the performances, patrons built a shell of plywood in a horse show ring at the Hanna Farm which lies on the west shore of Lake Mahkeenac. Benches were set in front of the shell to seat 2,000 music lovers. The entire community became imbued with the spirit of the Festival. Many offered their services for parking, as ushers, ticket takers, *et cetera.* This same spirit of festival participation, engendered in its pioneer days, has continued throughout the years and has added to the unique atmosphere to be found at the Berkshire Festival concerts.

The first series of concerts of this memorable fete, three in number, were given under a bright, starry, moonlit sky on August 23, 25, and 26, 1934. Those who listened to the music, superbly played, in such verdant surroundings, were surely conscious of the intensity of the emotional impact. To quote the press of August 24, 1934, "The sponsors of the Berkshire Symphonic Festival made good their promise of music under the moon last night when they presented 65 members of the New York Philharmonic Symphony Orchestra under the eminent conductor, Henry Hadley, in a program on the grounds of the Dan R. Hanna farm in Stockbridge as the first of the annual Berkshire Symphonic Festivals of three concerts. An audience which must have numbered more than 3,000 filled the well-planned 'auditorium.' As the concert began a full moon was poised quarter way up in the eastern heavens shining directly and refulgently on the field of eager faces. The acoustic properties of the shell were excellent, all things considered. The music carried to the last bench."

This first Festival attracted from 1,800 to 3,000 patrons at each performance, and the board of directors shared but a small deficit.

In the fall of the same year the Berkshire Symphonic Festival, now a non-profit-sharing organization with no capital stock, was incorporated under the laws of Massachusetts with unusually broad provisions to encourage education in the arts; to organize, conduct, and support an annual music festival; and to provide opportunities for developing musical and artistic talents.

The response to the first concerts was so encouraging to the Festival Committee that plans were laid for a second season of performances a year later at the same location. Dr. Hadley again conducted the orchestra of increased personnel. To make a more complete music fete, the Berkshire Music Association of two hundred voices was selected to augment the orchestral performance and Rudolph Ganz, pianist, was engaged as soloist for one concert. During the first concert of this season the weather became threatening and herein lies the root of our story. As a precaution, should the

occasion require, a large circus tent was erected to house the fete in addition to the open air arrangement of the previous season. This proved a wise and expedient gesture, and the audience felt relieved to be under a canvas during a subsequent rainstorm.

The second season was an outstanding artistic success and the attendance had now swelled to about 3,000 for each concert. All problems were successfully met now except monetary ones; however, these were soon solved when patrons of the Berkshire Festival met, with initiative and imagination, in executive session. The management decided to assume deficits and to expand its program.

Immediately, festival officials petitioned the Boston Symphony Orchestra to consider the feasibility of a contract to assume responsibility for the program of the Festival's future seasons. This invitation had an unforeseen effect upon Dr. Koussevitzky, the conductor of the famous symphony. Never having found complete fulfillment of his musical ideals in conducting for socially stratified audiences, the plan of the Berkshire Symphonic Festival greatly interested him. It was similar in certain respects to one he had experienced in Russia just before the outbreak of the Revolution. The new venture reminded him also of the concert tours that he had given in the first decade, when he toured with his orchestra by boat along the Volga River and gave performances in "opportune places" at nominal prices, for the populace. To condense the narrative, the Boston Symphony Orchestra came with its leader to Stockbridge, Massachusetts.

On August 13, 1936, this great orchestra led by its dynamic conductor, Serge Koussevitzky, made its Festival debut, a memorable occasion. Three concerts were held this time on the estate of Margaret Emerson between Stockbridge and Lenox on the westerly shores of Laurel Lake, under a tent with a seating capacity of some 5,000. The success of this season's events was broadcast nationwide; these concerts of truly great music had brought even wider recognition and presaged the prominent position the Berkshire Festival was to occupy in the world of music.

In 1937 Mrs. Gorham Brooks, a patron of the arts and sponsor of New England as a music center, generously offered to the Boston Symphonic Orchestral Society the famous "Tanglewood" estate where Hawthorne wrote his *Wonder Book* and *House of Seven Gables,* as a permanent home for the Berkshire Festivals. This beautiful estate is located on a bluff to the north of Lake Mahkeenac; from its site an expansive panorama unfolds itself, beginning with the serene beauty of the lake in the foreground and stretching with the rugged hills as far as the vista extends to Mt. Everett, towering majestically above it all. The gift was graciously accepted and the 1937 festival was held on the new home grounds surrounded by this majestic beauty. With no other housing facility available for orchestral performance, the tent was used again that year. But in order to accommodate the increased clientele of 4,800, it was necessary to add another section to it. The extended program for this season included

six concerts. During the second concert a veritable cloudburst fell throughout this section of the Berkshires. The noise of pattering rain on the tent top drowned out completely the sound of the orchestra. Within the tent enclosure there were no wet feet, but no one could get out, neither could he hear the music. Dr. Koussevitzky made three attempts to proceed with the program, but not until late

Tanglewood Shed, Lenox

in the evening did the Wagnerian storm become nature's successful rival. With all these adversities, the conductor was not discouraged; yet he agreed with the public at large and to the Festival committee in particular, that it was evident that a concert hall must be provided if successful permanent festival was to be held in the Berkshire Hills.

The tent had its charm, of course, for who is not thrilled when entering one of these large canvas canopies of a circus. The soft brown color of the fabric trimmed with scalloped overhanging fringe and bright red border added to the Festival mood. Furthermore the acoustics were good. It was gay as a county fair,—especially when brightly lighted,—primitive and simple, but its usefulness as a con-

cert pavilion was tried and found inadequate. By early winter, following the rain episode, enough money was raised to give the trustees confidence to plan for a new pavilion, and to begin work January 1, 1938, on the masterful project that was destined to be the present substantial, world famed Tanglewood Shed.

The Music Shed, as it is known, is a building of beautiful simplicity; shall we say the tent glorified? In this quotation from the 1938 *Berkshire Symphonic Festival Program,* one is able to learn something of the magnificence of The Tanglewood Music Shed. "It is believed to be the largest and most unique structure for symphonic music in the United States. It covers an acre and a half of ground. It is fan shape and seats 5,700 people, including 80 boxes. The outer curve of the fan measures 404 feet, more than two New York City blocks. The height of the structure is over forty feet and the distance from the stage to the last bench is 176 feet, beyond which is a surrounding arcade 27 feet wide. The building is supported by 78 columns which are over 20 feet high. When you see the small concrete caps around the base of each column it is hard to realize that down deep in the ground is a block of concrete over 8 feet square, weighing 14 tons.

"The result is that the audience, while entirely protected from sun and rain, still has the illusion of being out of doors. The stage is as large as Symphony Hall in Boston. On one side is a 'green room' for Dr. Koussevitzky and on the other, one for guest artists, while at the back is a large tuning room fully equipped for the musicians.

"Dr. Koussevitzky envisioned a permanent building for the Berkshire Symphonic Festival. It was his friend, the eminent architect, Eliel Saarinen, who drew the tentative plans for the shed. Joseph Franz, a member of the Board of Trustees and an engineer, assumed the task of making the detailed drawings, letting the contracts, supervising the work in detail from January 1, and completed it according to contract, one month ahead of schedule."

It is not within the realm of this writing to go further into the details of this structure but those interested are referred to *The Architectural Forum* of March, 1940, which gives a detailed description of the world famed Tanglewood Music Shed. Reference may also be made to Prof. F. R. Watson's text book, third edition, *Acoustics of Buildings,* published by John Wiley and Sons, New York, and Chapman and Hall, Ltd. of London. Professor Watson gives a scientific acoustical analysis of the shed.

The writer may seem to wander somewhat afar from the main subject, The Berkshire Music Festival, but in this instance a description of the "concert hall" and the setting is essential. Music is celestial, a building mere matter, but acoustics unite the two. A scientist speaks of a "reverberant auditorium" but the musician expresses it as being "alive."

Of the Festivals to date, Mary Pyle Spalding wrote in part, in the July issue of *Harper's Bazaar,* 1938, p. 78 and 103: "The Boston

Symphony in the Berkshire Hills may come to mean as much in the world's music as the festivals at Bayreuth and Salzburg * * * As its success has grown, the Festival has outstripped its original locations and capacities. Now it has a permanent home, a dignified beautiful old estate between Lenox and Stockbridge. The hills show the greens of virgin pines, maples and birches, and the valleys are dotted with broad, friendly farms. * * * This section of the Berkshire Hills is magnificent."

About this time the Berkshire Symphonic Festival organization extended its activities by organizing educational classes of the Music Layman's Courses presented in six Berkshire high schools. Miss Harriet Johnson, assisted by Miss Kathrine Philbrook, gave fourteen lessons in each school to approximately 1,500 children. At the end of each school year a quiz was given and tickets presented to those scoring highest in their respective classes. In addition, all the students were invited to the Saturday morning rehearsals of the orchestra. To these rehearsals were also admitted the membership (a member being one who purchases a season ticket for a series of concerts). During intermission, Olin Downes, music critic for the New York *Times,* gave lectures. The Festival organization also organized Festival Clubs at local libraries where several times each month phonograph concerts were given of the programs for the coming year.

Then there were also those delightful social functions held by the officers and trustees at their stately homes for the staff and coworkers. Musicals were held by Charles Louis Safford, Director of Music at Williams College. One's life surely felt enriched after these stimulating sessions.

The dream of Dr. Koussevitzky came true the summer of 1940. At that time the Berkshire Music Center was established and operated by the trustees of the Boston Symphony Orchestra, Serge Koussevitzky, Conductor. The faculty consisted of the conductor, members of the Boston Symphony Orchestra, and many leading musicians, teachers, and lecturers, representative of different sections of America. Additional buildings to accommodate the Music Center were erected by the Boston Symphony Orchestra organization,—an Opera House, Chamber Music Hall, and various other studio buildings for a Summer Music and Dramatic School. (These buildings were not built by the writer.)

The fifth Festival was held in the newly completed Music Shed beginning August 4, 1938. Six concerts were given with ever increasing numbers of patrons, the overflow sitting on the spacious lawn about the Shed. For the first evening Miss Gertrude Robinson Smith, president of the Berkshire Symphonic Festival and Bentley W. Warren, president of the Boston Symphony Orchestra, made dedicatory addresses, and a program consisting of Bach *Chorales* and Beethoven's *Ninth Symphony,* was given. As the voices of the chorus soared in the mighty *Ode to Joy* of the symphony and the warm, moonlit night was filled with the glory of noble music by the

Boston Symphony Orchestra and its eminent conductor, Dr. Koussevitzky, each of the 6,000 persons in the audience knew that the Berkshire Symphonic Festival had found a lasting place in the artistic and cultural life of America.

In 1939 another successful Festival was held, attendance reaching some 6,500 for each performance. This year, the *Berkshire Evening Eagle* wrote editorially: "Dr. Koussevitzky's performances were not of extra-curricular character but have usually constituted a cross section of the standard classic, romantic, and modern repertoire presented in Boston, such as Brahms, Sibelius, Bach, Haydn, Ravel, Tchaikovsky, Debussy, Moussorgsky, Mozart, Prokofieff, Rimsky-Korsakov, Schubert, Schumann, Stravinsky, and Shostakovich. Also works of American composers such as Henry Hadley (first conductor of the Festival), Aaron Copland, and others have received enthusiastic response from Festival audiences."

The first term of the school, July 8-August 18, 1940, was climaxed with the Festival, which comprised nine concerts performed by the Boston Symphony Orchestra in the Tanglewood Shed. The patronage increased to 10,000 or more for each performance. An important addition to the Shed this year was an Aeolian Skinner Organ, which contributed still further to the superb quality of the concerts. Well attended performances of operas were given in the opera house by the dramatic students. In retrospect, these enriched programs make this Festival one of the most outstanding in the history of the project.

In 1941 the eighth Festival included a series of nine concerts by an orchestra personnel of one hundred eight musicians. The attendance reached an all-high peak of 13,000. The summer school was well established with a student body of about three hundred fifty. Several operas were given this year plus an extra Gala Benefit for the United Service Organizations and British War Relief.

Due to restrictions in pleasure driving, the Berkshire Symphonic Festival was not held during 1942 but the school continued and Dr. Koussevitzky gave a series of six concerts, the faculty and student body performing.

In 1943 all activities were suspended.

In 1944 Dr. Koussevitzky presented a Bach Festival of three concerts performed in the Opera House (not in the Tanglewood Shed) with a curtailed orchestra. Some 1,500 people attended each concert. As the Opera House was limited to a seating capacity for 1,200, the overflow enjoyed the music seated on the lawn outside the building. This success of a music festival in those hours of world conflict shows the enveloping power of an art which can reach the heart and soothe a troubled mind.

With the complete removal of war restrictions and the return of normal travel conditions the Festival came into its own as word spread of the superb offerings to be enjoyed, and the attendance increased by leaps and bounds. The Tanglewood season of 1948

came to a close on August 15, with a record attendance of 14,000. The previous record was established the prior season.

The year's over-all attendance was 170,000 as against 146,600 in 1947. Of the 1948 total, 112,500 attended the large orchestral concerts in the huge music shed and the rest were present at the Bach-Mozart concerts in the theater-concert hall and the student and other auxiliary concerts. In the 1947 season the total for the large orchestral concerts alone was 106,000.

At this writing, plans for the 1949 Festival are indefinite but by the time the season arrives, all Berkshire County will be music-minded and the entire community will welcome music lovers from far and near, including representatives of many races and creeds to join with them and share the universal language that knows no foreign accent.

Chapter XLV

From a Local Viewpoint

The Genesis of Westfield

IN THE autumn of 1635 William Pynchon, with two scouts John Cable and John Woodcock, sailed up the Connecticut River in their little shallops and concluded an exploring trip at the confluence of the Agawam and the Connecticut rivers. There they found a band of nomad Indians, eighteen families in all, under the leadership of two natives whom Pynchon designated as "Commucke and Matanchan, ancient Indians of Agawam". Had Pynchon come a year earlier or a year later he might not have found a single Indian there, but there the English happened to come in 1635, and just there this little band of gypsies happened then to be.

Probably the natives had little comprehension of what was meant by land ownership in the English sense and they certainly had no knowledge of what obligations land sales entailed. But Pynchon was not a free agent. His superiors had cautioned him that "if any of the savages pretend right of inheritance to all or any part of the lands granted in our patent, we pray you endeavor to purchase their title that we may avoid the least scruple of intrusion".

Therefore, Pynchon presumably assured the natives that the land which they occupied was theirs, and that he proposed to buy it from them. A tentative bargain was made, the Indians eventually receiving for their domain, eighteen fathom of wampum, eighteen coats, eighteen hatchets, eighteen hoes and eighteen knives, in addition to which an Indian called Wrutherna acquired two extra coats, the reason for which is suggested by the fact that the composition of his name indicates that he was a prince in embryo.

By the deed of sale, to which they set their marks on July 15th of the following year, the Indians reserved to themselves about everything that was of value to them,—the right to fish on the entire premises; to hunt deer; to gather walnuts, acorns and sasachiminesh (cranberries) and to "have and enjoy all that cottinackeesh",—the cultivated fields on which they raised their tobacco, corn, beans, pumpkins and squashes. Thereafter their lives were one long dream of peace and indolence. Their miraculous white neighbors guarded them from their ancient enemies, the Mohawks (literally *they who eat*

animate things, i. e., cannibals) and their newly acquired English tools made their daily tasks were pastimes as compared with former days.

Small wonder that they lingered on in the laps of the gods.

Eventually, however, the native wanderlust prevailed and one by one they drifted away. Probably the two "ancient Indians" remained until death removed them, for the very name Matanchan (literally *the old and decrepit one*) suggests that their nomadic days were over.

Wrutherna (so named as a boy; as Wulluther as a young man and as Wequogan when he arrived at man's estate) went north and by marriage with the Nalwotogg princess, Awonusk, became chief of the Hadley Indians and the father of that young rascal, Squompe. Wrutherna (Wequogan) it was (and not King Philip) who, as the Hadley chief, instigated the raids on the settlers during King Philip's War.

Others of the Agawam people went to Woronoco and to Pochassic, which was a sort of no-man's-land to the west, and there took up unoccupied lands. Thither went Kenix and his wife. There, prior to 1641, Kenix died and his widow was known as Secousk (literally *a left behind woman,* i. e., a widow) even after she later married Janandura. Winepawin also went to Woronoco. Squatters from other sections found the valley attractive. A census of the territory would include the names of Amoakussen and his wife, Panesan and his wife Paupsunnuck, Alquat and his wife and their son, Wollump, Kenix and his wife, Janandura and possibly Lowontock and Walehwaet. These five to seven families, perhaps forty individuals in all, probably comprised the entire Indian population of the present Westfield in historic times. This seemingly sparse occupation was quite in keeping with conditions in other parts of interior New England at that time.

Modern Westfield comprises the two adjacent territories known to the Indians as Woronoco and Pochassic, the division between which is quite obscure. Woronoco extended from the present city, easterly to beyond Tatum, in West Springfield, title to it being vested in Panesan and his wife Paupsunnuck. The name aptly describes the territory for Woronoco means literally the *winding land* in reference to the course of the river. A good equivalent for it would be the Latin word *moeander.* It is the direct antonym of Chicopee.

West of Woronoco and extending indefinitely up the river valley was Pochassic. This name also well describes the region,—*where the narrows open out,* or figuratively, "the widening valley". Pochassic was owned by Alquat until his death about 1672, when it was inherited by his son, Wollump.

The first white man to become permanently identified with Westfield was Thomas Cooper, who, on December 10, 1658, was granted one of the four sections into which the territory was divided by the English. He was an able man; a competent carpenter and builder, and expert hunter, trapper and trader; fluent in the Indian tongue, a physician of sorts and a bone-setter of no mean ability. At Westfield, he was factor for John Pynchon in his fur trading operations.

The details and the ethics of the fur trade as developed by the Pynchons, without precedent to guide them, were the prototype of the policies of the great Hudson's Bay Company, which has been in continuous existence for more than two hundred fifty years. In the course of Cooper's operations at Westfield, the Indian Amoakussen became indebted to him for goods advanced and for which he was to deliver furs in payment. On being pressed, in desperation, he gave Cooper, on September 19, 1660, a mortgage on a large tract of land, which mortgage was confirmed by the Indian and his wife, on October 20, 1664. The color and atmosphere of the custom and procedure in such a case can be understood by a reading of Stewart Edward White's *The Silent Places.*

It later developed that the wily Amoakussen had conveyed land to which he had no title and Alquat and his son, Wollump, with patient optimism protested for seven long years that Cooper had acquired land which really was theirs. The Pynchons had from the beginning taught the Indians that they were a part of the body politic and that the courts operated as much for the natives as for the English. With patience exhausted, on September 26, 1671, the protestants finally applied to the Court for relief and there "after debate, both parties declared themselves agreed, viz, that Lieutenant Cooper will allow the said Indians 110 fatham of wampum, fifty fatham to be paid as he receives it of the Indian Walehwaet, about whom Lieutenant Cooper hath bestowed much care about his broken bones this last summer and the remaining sixty fatham to be paid within one year".

On May 4, 1663, John Pynchon secured from Panesan and his wife Paupsunnuck, a deed for the easterly part of their Woronoco lands and on September 25, 1666, he brought suit against the pair for the liquidation of a debt, whereby he secured the balance of Woronoco.

It was the beginning of the end for the natives.

On June 30, 1669, Alquat sold to the settlers another section of Pochassic, out of which he reserved seven acres of choice planting ground, but on April 25, 1670, he relinquished even that bit. Shortly after that Alquat died, but on November 24, 1673, Wollump sold to the English two square miles of his birthright, reserving for himself "one meadow lying before the Old Fort, on the south side of the river". That "fort" or stockaded native village stood approximately where the Tekoa Country Club house now is. The reserved meadow, of some forty acres, was the rich bottom land below it, annually overflowed and fertilized with silt, which became known as Wollump's Bottom. It is that torment of present-day golfers who are put to such ruinous expense by the ravages of the floods.

With the defeat of King Philip in 1676, practically all of the natives deserted the Connecticut Valley and became merged with the Scaticooks of the Hudson Valley. From there, in August, 1703, there came to Westfield a curious delegation, headed by an Indian known as Young Coggerynosset.

The first settlers at Poquonock, Connecticut, had been acquainted with Sheat, the local sachem, who had a son Coggerynosset who died in 1680. Coggerynosset and his wife, Qushabuck had a daughter, Mishnoa, baptized by the English as Margery and a son, this Young Coggerynosset, who became an able interpreter. Acting in that capacity, he represented his four associates who claimed to be "relations of Wolump, formerly of Pochassic, owner of a tract of land at Pochassic, lying before the Old Fort, commonly known as Wolump's Bottom". For "five pounds current money and two new coats", they relinquished their rights and that deed concluded the final sale of lands in Hampden County by the Indians.

The native exit was complete.

A record of the transaction is preserved in Hampden County Registry of Deeds, Liber 5, folio 133, under date of August 11, 1703. A transcript of that conveyance, partially abbreviated, but including all pertinent facts, reads as follows:

"We, Wallascoanoote, Nahhaieawolemett, Suckoneage and Petoawoacute, of Albany, alias Housatunuck, all Indians and relations of Walump who was formerly Chief Sachem of Pochassuck, for and in consideration of the sum of five pounds current money and two new coats paid by Preserved Clapp, of Northampton, husbandman, do sell a parcel of land in Westfield containing forty acres which is that parcel which Walump reserved to himself when he sold his other land at Pochassuck which land lies before the Old Fort in a place now commonly called Walump's Bottom, which land lies bounded upon Pochassuck, alias Westfield river northerly, and southerly and easterly upon the Great Hill and westerly upon the land which Walump formerly sold.

"Tattapasett and Petaaucott do affirm (as their interpreter declared) according to Indian custom, that the subscribers to this deed of sale on the other side, are the proper surviving heirs unto Walump the Indian Sachem who was the original owner of said land within mentioned. Also, the said interpreter, commonly known by the name of Young Coggerenoscitt does affirm the sale".

West Springfield, Mother of Holyoke

In the year 1630, William Pynchon, a well-to-do country squire of Springfield, England, came to America with that group of Englishmen who established Massachusetts. He settled at Roxbury, where for five years he carried on a successful business, importing goods from England which he exchanged with the Indians for skins of wild animals. In time, competition amongst the fur traders became so keen that he sought a wider field, and to that end, he sent out scouts to search for a desirable territory. In the autumn of 1635 he sailed with two of them, John Cable and John Woodcock, to view a tract previously explored by those agents. After doubling Cape Cod, they passed through Long Island Sound and up the Connecticut River,

until at a point where the Agawam River enters the Connecticut, they came upon a situation that filled their needs.

At Agawam, the three explorers found a little band of Indians with whom they made a tentative bargain for a tract of land which comprised approximately that now included within the bounds of West Springfield. Here were almost ideal conditions for the project in hand. Generous portions of the tract were annually inundated by spring floods, receiving each year a deposit of rich, fertilizing river silt, yet there was ample high ground for a town site.

After concluding preliminary negotiations with the Indians, Pynchon returned to Roxbury in September, to prepare for the exodus of his associates in the spring. Cable and Woodcock remained and erected a house on the south side of Agawam River, under the hillside and almost directly below the palisaded village of the natives. This was the first house built in Western Massachusetts, and out of a dispute over it, came the first local law-suit,—Woodcock *versus* Cable, November 14, 1639.

It is apparent that these two pioneers had with them both cattle and swine, for when Pynchon returned in the spring of 1636, he found that the future of his enterprise had been sadly jeopardized. Not only had the livestock so ravaged the native planting grounds that the Indians "demanded a greater sum to buy their rights to the land", but they also insisted that if similar damage was done in the future, the English were to "pay as it is worth". All prior plans were thereby set at naught for the basic intent of the settlement contemplated the full use and occupation of the rich bottom lands of Agawam. Fencing such a great tract being out of the question, a complete removal to the east side was the only alternative.

This was a bitter blow, for on the east side there was an almost utter lack of the required essentials. Contrary to general thought, southern New England was then not one vast forest, but due to the annual burnings of the Indians, except for the river bottoms and swamps where fire could not run, it was an expanse of open spaces. There probably is today in eastern Massachusetts and Connecticut, far more wooded area than there was when the Pilgrims landed. So continuous had been these burnings that even the soil and duff had been consumed leaving an almost sterile land. The entire area from the crest of Armory Hill, easterly to the Wilbraham Mountains were designated on the 1795 map as "pine barrens interspersed with unimprovable swamps", and in spite of the accumulated leaf mould of three centuries, it remains little else today. There is documentary evidence that these fires may not have crossed the Connecticut River, for there seems to have been ample building timber in West Springfield, but in Springfield, timber was so scarce that the very earliest plantation order prohibited the cutting of a single tree without permission.

On July 15, 1636, the Indians affixed their marks to a formal deed covering three specific tracts for which they received merchandise value at £30. Five-ninths of this was for the west-side land. Two-

ninths was for that now occupied by the city of Springfield and extending northerly to the Chicopee River. The remaining two-ninths paid for the "longmeadow".

From sheer necessity, in spite of constant friction with the Indians, the settlers from the very first, progressively made more and more use of the west-side lands. To end incessant bickerings, the town in 1666 bought out all but a few stray bits of the remaining lands of the Indians and removed the entire body of natives across the river, where they were installed in an English-built palisaded village on Long Hill. Only then was full use made of the west-side lands.

There is little realization of the part taken by the Irish race in the building of West Springfield.

We are told that the Irish became emigrants to America only after the famine of 1846, about the time of the building of the railroads. But nearly two centuries before that time, John Riley came to West Springfield, and in addition to other things, he gave his name to Riley Brook, which now marks the division between West Springfield and Holyoke.

John Riley first appears in local records in February, 1659/60, and that year he married Margaret O'Dea. Two daughters were born to this couple; Margaret in 1662 and Mary in 1665. Both were married in 1685, Margaret to Bill McCranney and Mary to Joe Ely. To Margaret were born nine children, while Mary had eight. With their numerous progeny together with others of their own race whom they gathered about them, they took over and subjugated much of that tract known to them as Ireland, that later became Ireland Parish, which conforms roughly to the bounds of the city of Holyoke.

Consider this excerpt from the town records of 1728,—"Whereas, there is a highway through the lands of the Elys and the McCranneys, at the place called Ireland". It really sounds as if a bit of the old sod had been transplanted to the Connecticut Valley in loving memory of homes left behind.

It is regrettable that the city of Holyoke did not perpetuate the name that was its birthright instead of adopting that of one who had little part in its beginnings.

In its earlier days, West Springfield was pretty much a frontier town. For two hundred fifty miles to the north and one hundred miles to the west there was nothing but wilderness. Gradually a way to the west was opened. As early as 1662, John Pynchon made use of a primitive path for transporting trading goods to the Housatonic Valley and to Albany. In time this became a crude cartway, serving new settlements, such as Westfield, Blandford, Otis, Monterey and Great Barrington. But the grades were something appalling, and also, between Blandford and Monterey was a twenty-mile-wide tract, known as the "Greenwoods", made up of an almost impassable forest.

A longer and more circuitous road to Albany was *via* Suffield, Simsbury and Litchfield, but the hardy pioneers preferred the shorter and more direct way, in spite of its hazards.

In September, 1758, Sir Jeffrey Amherst led his British troops through here when enroute to the siege of Fort Ticonderoga, on Lake Champlain, then held by the French. Landing at Boston, the army proceeded to West Springfield, with the intention of continuing on *via* the Suffield-Litchfield route. But General Amherst sent forward an aide with instructions to investigate the possibilities of the Blandford-Otis road, with the following results. It is well to have the story in Amherst's own words, as it illustrates the efficiency of the British army, two centuries ago,—the army that was beaten by the "ragged Continentals", a score of years after this episode.

Amherst recorded in his journal,—

"September 24.—I marched before day break and went through a woody country to Springfield. No parts cleared, but the woods had no high underwood, as they had burnt it constantly for nearly two years and the country people say that it has spoiled the ground. Lt. Col. Robertson met me at Springfield. He had been to the Greenwoods, and thought that with the Pioneers and the help of some local people, we might pass that way, so I changed my intended route. Springfield has five parishes; about 100 families in each. Lays on both sides the Connecticut river, 75 miles from the sea and the river is very fine, but there are some falls between the town and the sea that hinder ships from passing. Navigable for flat bottomed boats. A sloop of 70 tons was built at Springfield and passed the falls and rocks in a flood".

"September 25.—I got all the ferry boats and other boats that could be had and passed over the five battalions and encamped on the other side to be ready to march the next day. I sent forward 200 Pioneers with tools and the Light Infantry of Frazier's under the command of Major Clepham. We got boats enough to pass a regiment and all its baggage in an hour's time, so the whole was over in good time, and encamped about half a mile from the water side. I settled everything for the march and passed over, but because the wagons did not come in as ordered, I was forced to delay the march for a few hours. Next morning I sent Col. Robertson forward".

Thus General Amherst made of the pioneer trail, a military road by which the Americans profited much during the Revolutionary War, and that road made West Springfield something akin to what St. Louis was a century later, when miners, trappers and settlers were there outfitted for the overland journey to the gold fields of California and to Oregon. It was the last port of call for travelers to the West.

In 1764, Ensign Francis Miller, a British army engineer was ordered by General Gage to make an actual survey of the road. The result was a map amazingly accurate in most of its details.

Such was the importance of the west-side settlement that travelers often referred to it as Springfield, while the village on the east side was commonly known as East Springfield. But it was left for Ensign Miller and his engineers to offer the crowning insult. On his

map, the west-side section is plainly designated as Springfield, while the area on the east side shows not a letter nor a word. There is not so much as a pen scratch, except for one lone maple tree.

In 1774 West Springfield became a town in its own right and with its own name. Yet the mother town continued to be misunderstood, for as late as 1796, it still appeared on Reid's official map as East Springfield.

In 1775 came the Battle of Lexington. In the morning hours of April 20th, Israel Bissell galloped into Springfield with the call for the minute men. Bells were rung and alarm guns were fired, while troops gathered to take up their share of the town's powder and flints. Later it appeared that in the excitement, several muskets were unaccounted for which the town was morally obligated to replace.

In those days, guns were not made in factories, but in the homes and shops of individual specialists, as in more recent years, Swiss watches were made. A gun barrel or a bayonet could not be fashioned by a mere blacksmith, but was the work of an expert. Another skilled worker made the locks. Still another made the stock from a block of black walnut timber and he also collected the component parts and assembled them into the complete weapon. It so happened that Springfield lacked such highly skilled artisans and in the emergency was forced to call on the community across the river.

On March 12, 1776, the town of Springfield paid £35 to Horace White of West Springfield, for making twenty gun barrels and ram rods. Martin Ely of West Springfield received £25 for twenty locks and rigging. For making twenty gun stocks, supplying some minor parts and completing the guns, Reuben Bliss of Springfield was paid a bit less than £8. This Reuben Bliss was an exceptionally talented woodworker. When his house on South Main Street, in Springfield, was demolished in recent years, a Brooklyn museum paid a seemingly exorbitant price for the paneling from one of the rooms.

When the British shut themselves up in Boston after the Battle of Lexington, Washington sent General Knox to secure the artillery that had been lying idle at Ticonderoga, ever since Ethan Allen and his handful of followers had taken the fort from the British, "in the name of the Great Jehovah and the Continental Congress". Building forty-two stout sleds, Knox brought forty-three pieces of heavy ordnance over Amherst's military road, arriving at West Springfield in mid January, 1776, with his sixty tons of unwieldy freight drawn by eighty pair of oxen.

The weather that January was so cruelly cold that on reaching West Springfield, Knox found it feasible to sled his heavy loads over the Connecticut on the ice. In recognition of his feat and its part in driving the British out of Boston, the road is now named and marked as the Knox Trail.

The following year the road twice proved its worth. When the British Army under General Burgoyne surrendered to the Americans at Saratoga, New York, in October, 1777, great quantities of captured arms and equipment came over the mountains for repair and storage.

The captured troops were marched to Boston, one division by way of Pittsfield and Northampton and the remainder *via* the Knox Trail. On arrival at West Springfield, these prisoners encamped on the common while waiting for the County Ferry, operated by Gideon Leonard of West Springfield to transfer them across the river. All along the line of march, on account of the man-power shortage, the prisoners were constantly importuned to desert, and at West Springfield, quite a few did so. Perhaps the best known of these was Valentine Worthy, then thirty-two years old, who died here in 1833 at the age of eighty-eight. Many will have memories of Justin L. Worthy and his son Frank, as well as the Worthy Paper Company and the Worthy Hotel.

During the Revolutionary War, the two roads westerly from West Springfield were the most vital military roads in the country. Receipts of the wagonmasters show a constant flow of inbound and outbound freight. To Bennington,—to Ticonderoga,—to Saratoga. To the artillery depot at Litchfield,—to the Highlands of the Hudson, West Point,—Philadelphia,—Valley Forge. At Great Barrington, Deputy Quartermaster General Walter Pynchon gathered corn, wheat, oats, flour, butter and nail rods. In November, 1777, one hundred barrels of flour were sent on from Kinderhook, New York, with the promise of an additional fifteen hundred barrels "as soon as the roads will permit".

By order of Washington, General Knox established at Springfield, in 1777, an immense depot for the handling of all war stores, whence were brought the cannon, ball, powder, muskets, tents and other supplies bought in France and other foreign countries. From Portsmouth came the twelve thousand muskets brought from France on the *Amphtrite*. After the battle of Saratoga, General Gates sent three thousand stand of captured arms to Springfield and thirty brass cannon to Litchfield.

At Springfield was a company of blacksmiths, another of saddlers, one of carpenters, one of nailmakers and a corps of French artisans serving as armorers. They were all enlisted into the Continental service, the master mechanics were commissioned as captains and the foremen as lieutenants. There was no overtime nor double time for Sundays. These mechanics soon found that they were then very much in the army.

One of the captured officers of General Burgoyne's army reported that "this place is a veritable magazine for the storage of weapons for the Americans and it also has a small but very well built armory or arsenal. We saw here various parks of artillery with their trains and among other things, twelve entirely new four pounders of French make. The store or magazine houses are filled from top to bottom and workmen of all trades are seen in the houses, engaged in the manufacture of ammunition, wagons, guns &c. I have seen here wagons which could not have been better made in England".

All this was under the command of Lieut. Col. William Smith, barely twenty-one years old when commissioned and placed in charge.

We like to think that our recent wars were conducted a bit more efficiently and cleverly than wars were ever planned before, but in many ways we simply followed in the footsteps of our fathers. Then there was no O.P.A. nor W.P.B., but there were their counterparts. Raw materials, machines and tools were confiscated and warehoused by the Committee of Sequestration. To secure such, not only was priority requisite, but an order from the Board of War as well. The records show that even Colonel Smith was obliged to follow that routine and only by such procedure could he obtain for the Springfield Armory so much as a sheet of glass, a gimlet or an ink stand.

All this activity centered at the West Springfield ferry, where traffic became so congested that it simply could not be cared for. To relieve this bottleneck, General Greene sent in from outside, a dozen experienced boatmen who built barracks on both sides of the river and three scows. For a time, all was well, until Gideon Leonard, of West Springfield, holder of the Public Ferry franchise, discovered that the Continental Ferry was transporting civilians. His protest was loud and long. The Continental Congress being a typical Congress, a probe was ordered, and in November, 1778, hearings were held at Parsons' Tavern, in Springfield. The disclosures were quite shocking. Leather from the public stores had been used for civilian shoes. Public cloth had gone into civilian clothing. Houses had been heated with wood from the public woodpile. But the height of infamy was disclosed when it was brought out that with public funds, the young officers had built a yacht christened the *Lady Washington*, which in the words of the testimony was used for "sporting up and down the river".

Subsequent courts martial resulted in some of the personnel being relieved of their commissions and their uniforms.

It all gives a picture of West Springfield conditions at the time. So serious was the housing shortage in Springfield that West Springfield bedded and boarded many a war worker. Wagonmasters and wagon conductors swaggered about the town streets. Shortly before, they had been mere farm hands but now they had become widely traveled men of parts and experience. They were a picturesque lot as they lolled about the transport wagons, awaiting their turn at the ferry.

Seven years after the war, in 1790, the first Federal Census was taken and it was an ambitious undertaking. One may read the names of the two hundred sixty-six heads of families in Springfield or the three hundred eighty-four in West Springfield. The complete census discloses that in spite of war conditions, the west-side had not only held its own but had increased its lead over the old town. Springfield had two hundred thirty-eight houses with a population of 1,574, while the west-side had three hundred seventy-two houses and a population of 2,367. Hence, West Springfield was fifty per cent greater in population than the mother town.

In 1800 and again in 1810, the west-side was still comfortably ahead, but by 1820, it was badly outstripped and never regained the

lead. The cause of the change in trend cannot be readily detected. Possibly the establishment of the Federal Armory was the principal cause. Perhaps it was the steamboat activity in Springfield. Had the Hartford railroad not crossed the river at Windsor Locks to accommodate the newly organized Thompson Carpet Company and the Hazard Powder Company at Enfield, the railroad terminus would have been at West Springfield, and probably that would have been the starting point for the Connecticut River Railroad. On such minor turns of the wheel hang fate and fortune. At best it is idle speculation and more within the province of the economist than that of the historian.

On July 7, 1786, that part of West Springfield which later became Holyoke, was incorporated as the Third Parish of West Springfield, being known as Ireland Parish. Directly across the Connecticut River from Ireland was South Hadley and the canal which eventually was abandoned as of little value to navigation. However, it was successfully used for supplying power to a number of industries and hence called attention to the wasted opportunities on the west-side. In 1847 a number of Boston investors became interested in the situation and at the succeeding session of the legislature, secured an act of incorporation under the name of the Hadley Falls Company "for the purpose of constructing and maintaining a dam across the Connecticut and one or more locks and canals in connection with the said dam; and of creating a water power to be used by said corporation for manufacturing articles from cotton, wood, iron, wool and other materials, and to be sold or leased to other persons and corporations, to be used for manufacturing or other purposes and also for the purposes of navigation". The beneficiaries under this were Thomas H. Perkins, George W. Lyman and Edmund Dwight. The capital stock of the corporation was fixed at $4,000,000 divided into shares of $500 each. The new company bought the entire property and franchise of the "Proprietors of the Locks and Canals on Connecticut River", owners of the Hadley Canal. A new dam was completed in 1848, but it was so poorly conceived and constructed that it was swept away within a few hours after the gates were closed. In 1849 the company proceeded with the erection of another dam, which proved a complete success. In 1855 a contemporary said that "the water power produced by this dam is unparalleled in America. The fall is so great as to allow of the water being used twice by the mills on two different levels, the canals having been constructed for the fulfillment of this design".

On the 14th of March, 1850, individual owners were incorporated as the town of Holyoke and on the following first of May the population numbered 3,713.

To provide an adequate supply of pure, soft, water from the Connecticut River, a large reservoir was built upon the highest point of land in the village, of the capacity of 2,000,000 gallons into which the water was forced by pumps, driven by water. The water of the reservoir was seventy-two feet above the top of the dam and had

sufficient head to force itself over the roof of the highest mills of the upper level.

In 1855 it was reported that "here, for many years a small cotton factory was furnished with power by diverting a portion of the waters of the Connecticut into a canal".

The new Hadley Falls Company built two textile mills on the upper level of water power. Each measured two hundred sixty-eight feet by sixty-eight and were five stories high. Number One had 18,432 spindles for No. 14 yarn and Number Two, 30,700 spindles for No. 80 yarn. The two mills employed an aggregate of 1,000 operatives for whom the company provided adequate boarding houses.

The company also built a machine shop, four hundred forty-eight feet in length, giving employment to three hundred. In the rear was a foundry, two hundred by forty-eight feet and a blacksmith shop, two hundred by forty-eight feet. This plant was designed to supply machines and machinery with which to equip various textile mills in New England, in many of which the same group of Boston investors were jointly interested. It was the proud boast of the management that "every variety of machinery is procurable at this establishment".

For simplifying the financial set-up, on January 1, 1854, the Hadley Falls Company was divided into two separate units. A new corporation, called the Lyman Mills took over the two textile plants and the boarding houses, while the original company retained the dam, canals, machine shop and the newly completed gas works, the capital stock of each corporation being $1,500,000.

The Hampden Mills was the name of a corporation for which the Hadley Falls Company built a cotton-mill under contract in 1853. The building was one hundred ninety-eight feet in length and seventy feet in width, with adjoining biuldings, having an aggregate length of three hundred thirty-eight feet. The mill ran 10,000 spindles and employed three hundred operatives.

At about the same time, the Parsons Paper Company built a mill for the manufacture of a high grade of writing paper, which was the first of Holyoke's many paper-mills. The main building was one hundred sixteen feet long by fifty feet wide, with three stories besides the basement and attic and two wings each seventy feet long. It was one of the most completely equipped mills of that period in the United States. The original capital stock was $60,000 and the head of the company and the individual from whom the corporate name was derived was Joseph C. Parsons of West Springfield, who was a practical papermaker, having had experience, first with D. & J. Ames and then with the Eagle Paper Company of Suffield, Connecticut. He produced the first paper used by the United States Government in the making of stamped envelopes.

The Hadley Falls Card and Wire Works, carried on by Woods & Brother, manufactured cotton and wool cards, employing nine hands.

N. Clark & Company employed five hands in the manufacture of card, piano-forte and broom wire.

The name of Edmund Whitaker completes the roster of Holyoke's pioneer industrialists.

The paper industry, which has so long dominated the industrial life of Holyoke, had its roots in Springfield, where an attempt was made during the Revolutionary War to establish a paper-mill. The proprietors of the iron works on Mill River conceived the idea and received from the town a grant of lands and privileges, but for some reason the grant lapsed and no mill was built. However, in 1786 Samuel Babcock owned a mill there, making newspaper. Another mill had been established on Mill River prior to 1788, probably by Eleazer Wright and it is believed that this mill was bought by David Ames in 1800.

David Ames was born in West Bridgewater, Massachusetts in 1760, and came to Springfield as the first superintendent of the United States Armory, which post he held from 1794 to 1802, resigning to devote his entire time to his manufacturing interests in which he was associated with two of his sons. The eldest son, David, Jr., became an excellent papermaker, but it is John, the youngest, that the world is indebted to for the improvements that changed the business from a handmade to a machine-made process. John Ames received the first patent for a cylinder machine in 1822. Other practical inventions of his were a trimming knife, a pulp dresser, a cutting machine and a drying machine as well as calenders for finishing the paper. He originated the idea of running a continuous sheet of paper through the sizing instead of dipping each sheet as had been the custom. In 1828 the two sons bought the father's interest and the firm became D. & J. Ames. Besides the original mill at Springfield, the firm bought a mill at Suffield, Connecticut, one at Chicopee Falls and another at Northampton, formerly owned by the Clarks. They also built a twelve-engine mill at South Hadley Falls. It has been estimated that at that time the Ames family produced one-half of the paper used in the country and it is conceded that to the genius of John Ames a greater share of credit is due for inventions improving the art than to any other man. The Springfield *Republican,* on January 21, 1832, speaking of the improvements at the Ames mill remarked that "if the improvements in the manufacture of paper and in the art of printing proceed as they have in the last ten years we may expect to see a machine which will receive rags at one end and deliver the books, all printed and bound at the other".

Another early paper maker of the Connecticut Valley was Joseph Carew. In 1830 he had charge of the paper-mill in South Hadley Falls, owned by Howard & Lathrop, competitors of the Ames. In 1848 he organized the Carew Manufacturing Company and built their mill at South Hadley Falls.

The second paper making concern in Holyoke was the Holyoke Paper Company, whose mill was built in 1857. Orrick H. Greenleaf of Springfield was the controlling owner and the results of his management were always satisfactory to his stockholders. He died in 1896.

The Whiting Paper Company was organized in Holyoke in 1864, by William Whiting, who was first connected with the Holyoke Paper Company and then with the Hampden Paper Company before organizing the corporation which bore his name. He built a second large mill in Holyoke in 1870 and soon thereafter acquired the mills of the Collins Manufacturing Company in North Wilbraham. The production of these three mills in loft-dried writing paper exceeded in volume that of any competitor doing business in this country.

Others among the manufacturers of paper in the valley deserving mention are Wells and John Southworth. These men owned and successfully managed the mill of the Southworth Paper Company in Mittineague and the Hampshire Paper Company in South Hadley Falls.

Chapin & Gould were proprietors of a mill in Russell and began the making of a high grade of writing paper in 1861.

George L. Wright, known to his friends as "the mayor of Mittineague" organized the Agawam Paper Company in the early '60s, producing high-grade writing paper.

Zenas Crane was the pioneer paper manufacturer in the Berkshires. He built the first mill in Dalton in 1801 and was superintendent and manager on a salary of $9 per week. His management was of a character which brought great prosperity to Dalton,—the Crane paper always being of very superior quality. It is an honor to the name that for years the United States Government awarded the contract for all the special paper used in making currency and bonds to the Cranes.

Byron Weston of Dalton was a successful manufacturer of the best grades of account-book paper and in alliance with the L. L. Brown Paper Company of Adams was for a long period able to control the market for that grade of paper.

Such were the men who conceived and nursed the city of Holyoke through its formative years. Their faith was high,—their energy unfailing. The dominant element was the river,—the river and the falls,—the falls and the dam. The ceaseless flow that men translated into horse-power and the power into gold.

The dam has been the scene of many tragedies.

Changes in the stream, brought about by shifting currents due to unnatural conditions necessitated frequent inspections below the surface of the water and continuous efforts were required to keep the structure at its maximum of efficiency and safety.

Old timers recall a test made about 1868-1870 which revealed that hollows many feet deep had been worn in the river bed, necessitating immediate correction. These pits were first filled with bags of sand and then topped with cribs of criss-crossed logs, filled with stone until they sank. While this work was in process a diver below was caught by diverse currents which snapped the tubes and lines connecting him with the surface. Search for his body was utterly useless. He was probably drawn into some crevice and there buried beneath the mass of stone being used to complete the fill. There he lies entombed for

all time while the great dam serves as his gravestone and the river perpetually sings his requiem.

This is all reminiscent of another river burial, but one in which the note of tragedy is lacking.

The diminutive stern-wheel vessel *Charles H. Dexter,* built in 1866 was the last steamboat to operate on regular schedule on the river above Hartford. Because of a major accident to its machinery it was eventually abandoned at Dutch Point in Hartford. When land at the Point was filled in to provide a building site for a generating plant of the Hartford Electric Light Company, the hulk was gradually buried. Piles were driven into it and through it until finally the great structure was erected over it, providing a unique monument for a faithful servant of an earlier day.

Springfield Grows Up

Toward the end of the first quarter of the nineteenth century, Springfield began to hear, from its own people, some quite caustic comment on the unkempt appearance of the town's civic center. Typical New England towns tended to cluster about a village green which provided a setting for their public buildings, but for nearly two centuries, Springfield lacked even the present Court Square.

The unpleasing state of affairs was emphasized by the completion in 1819 of a new Meeting House for the First Church,—fourth successive edifice and the one still standing after continuous use.

The great timbers of the present church came from far up the Connecticut River from immense white pines, the like of which could not be found today in New England. In 1810 Levi Chapin purchased a large tract of timberland in Walpole, New Hampshire, and in 1818 he contracted to supply certain timbers, as follows:

"Walpole, N. H., May 29, 1818.

I promise to deliver 1,804 feet of timber for Springfield meeting house by the first day of July at 14 cents a cubic foot, on delivery as follows,—

2	Gallery Sills	78	feet	12 by	12
7	Beams	77	"	11 "	13
1	Beam	52	"	10 "	12
8	Rafters	42	"	11 "	12
2	Posts	69	"	12 "	12
4	Posts	63	"	12 "	12
8	Posts	70	"	11 "	11"

A new church building for the Unitarian Society was completed in 1820 at State and Willow streets and it was proposed that a new Court House, then contemplated, should be set in that same section as in 1828 the new Town Hall (State and Market streets) actually was.

But a self-appointed group of citizens would give no heed to the clamor for a change and backed their opinion with both time and money. The loveliness of the new First Church itself only emphasized its unpleasing situation. Adjacent to it was the old Parsons Tavern with its numberless barns and sheds and all their filth, accumulated over the centuries. From Main Street, well back to the river, houses, barns, storehouses, sheds crowded about the church.

The citizens' group contributed varied sums to make up a fund of nearly seven thousand dollars for the buying and disposing of these rookeries, individual contributions varying from eight hundred down to twenty dollars. Land for a Common and for the Court House, (next north of the church) was reserved and the balance was sold to reduce the cost of the project. The land thus reserved was on April 14, 1821, made over to the county "in order that there may be an open square or yard for the use of the inhabitants of the county near the Court House, diverse persons, inhabitants of the town of Springfield, have at great expense purchased this land in order that a Court House may be built thereon and an open square or common be in front thereof, never to be aliened, leased or encumbered in any manner, except that it might be fenced, secured and ornamented with trees."

The "square or common" thus provided was a low-lying piece of ground, which in wet seasons was little more than a quagmire. Elm trees were planted and from time to time, much filling was dumped in to raise the level. The Park Commission reports show that as late as 1899 the central portion of the square was raised nearly five feet, resulting in the death of a number of fine elm trees.

In an additional effort to return to the promoters as great an amount of cash as possible, Court Street was opened to Water Street (now Columbus Avenue) which then extended only a part of the way to Bridge Street. Thus a number of desirable building lots came on the market.

An ornamental iron fence with gates at strategic points was installed to completely surround the Square as is clearly shown in older photographs. Under date of December 8, 1885, in exchange for a token payment of $250, ownership of the Square was taken over by the city of Springfield, prior to which the County had removed the iron fence which was eventually installed on the premises of the County Jail on York Street, and there it remains.

At a meeting of the selectmen of Springfield, held on April 5, 1826 an order was approved for the naming of the streets of the town, in the following manner:

"The following report was read and considered and accepted. The undersigned to whom was referred the application that certain streets in the Town of Springfield be designated and known by certain names having had that subject under consideration respectfully report That in their opinion it would be a convenience to the inhabitants and therefore recommend that the following streets be named as follows, To wit, from the dwelling house of Joseph Carew to the

Bridge over Mill River, Main Street—from said Carew's north, North Street—from said Bridge south, South street—from the upper Ferry to Main Street, Ferry Street—from Springfield bridge across Main Street to Chestnut Street, Bridge street—from Bridge Street to Isiah Call's brick building, Water Street—from said building to Main Street by E. Russell's Coffee House, Court Street—from the landing by the Burying ground and D. Lombard's to Main Street, Elm Street —from Main Street to the parting of the roads near Goose Pond, State Street—from Main Street by School house in District No. 9 and David Ames's to United States Upper Water Shops, Mill Street— from State Street by George Bliss's junior to Bridge Street, Chestnut Street—from State Street by Samuel Ornes to Mill Street near D. Ames's house, Maple Street—from Maple Street by Methodist chappel to street leading from United States Armory to Watershops, Union Street—the square North of Wait's Monument, Franklin Square —from Franklin Square North to the intersection of North Street, Armory Street—from State Street near Wait's monument to upper United States Water Shops, Walnut Street—the square west of the United States Armory, Liberty Square—the street leading around the same, Liberty Street—from State Street south by Henry Starkey's to the intersection of Walnut Street, Pine Street—from State Street northerly to the Chicopee River near Benjamin Belcher's, Factory Street—from Walnut Street West by Moses Daggett's House, Pleasant Street.

"All of which is respectfully submitted.

SOLOMON HATCH
WILLIAM RICE
GEORGE COLTON
Selectmen."

Under date of May 15, 1826, is found this reference to the naming of Court Square:

"The square in front of the Court House and the Rev. Mr. Osgood's meeting house to be known by the name of Court Square and the street from Maple Street by the Baptist Church to Mill Street to be known by the name of Center Street."

The following year (1827) the first local high school was established at the northeast corner of High and School streets, the latter highway receiving its name at that time.

To fully understand the foregoing, it must be realized that the dwelling of Joseph Carew was then at the northeast corner of Carew and Main streets. North street is now North Main Street. Ferry Street has become Cypress Street and Water Street is Columbus Avenue. Goose Pond was at Winchester Square and Factory Street is now St. James' Avenue. Pleasant Street, which then extended only from Walnut Street westerly to the brow of the hill at Wesson Hospital is now High Street. Franklin Square was that part of the Armory grounds which now lies between Federal and Magazine

streets while the open space east of the present Main Arsenal was called Liberty Square.

With the street naming completed, Joseph Ashley, in 1827, made in colors an elaborate map of the town from Longmeadow to the Hadley line, Chicopee then being a part of Springfield. This showed not only the roads and streams, but also indicated the houses with the owners' names. It was made in sizable sections, put together with dressmaker's hooks and eyes. In its old wooden case, it is today a valued item in the equipment of the City Engineer's office.

Samuel Bowles, who had come from Hartford in 1824 to establish the Springfield *Republican,* secured a reduced-size copy of the map, from which he published a wall map. His action brought much criticism and the charge that he had used town property for his personal benefit.

For nearly two centuries, Springfield people continued to abide adjacent to the open swamp which bordered their town street for nearly its entire length. Though they had no knowledge of the facts, those swamps were the breeding place of the myriads of mosquitoes, so often complained of, which made life a burden. Malaria, fever and ague and similar allied ills, took fearful toll. On the first terrace east of the town was a greatly superior site for residences and about this time the opportunity began to be taken advantage of. Chestnut Street was taken over by a small number of the more wealthy citizens and became a closely restricted residential district. Only eight houses were permitted for its entire length from State Street to Bridge. No buildings whatever were allowed on the west side of the street, that the view across the town to the western hills might not be impeded.

In a similar manner, Maple Street became of interest to a group of younger men who built for their brides, very substantial but more modest homes.

In 1818 John Howard of Springfield, then twenty-seven years old, married Mary Stoddard Dwight, daughter of Col. Thomas Dwight, also of Springfield. Colonel Dwight inherited from his father, Josiah Dwight, the house which the latter had built in 1764 and which now stands on Howard Street, east of the Young Women's Christian Association. This is now the oldest house in Springfield and it was the birthplace of Mary Stoddard Dwight. John Howard was born in the church parsonage on Main Street, south of Besse Place, built to replace the parsonage of 1639, which was destroyed by the Indians in 1675.

John Howard had graduated from Yale in 1810; was admitted to the bar in 1813; and at the time of his marriage was well on the way to a successful career. To the couple were born three daughters: Margaret, who married Charles W. Swift of London, England; Frances, who made her home in Paris; and Elizabeth, who married Baron de Stoecke.

Young Mr. Howard in 1819, built a new home for his bride and that it might include all that was most modern and desirable, the

details were entrusted to Simon Sanborn, master builder, who had come to Springfield in 1810 and who was destined to build many of the finer homes of that era, including the Alexander House, still standing on State Street and the Orne House that stood where the Colony Club now is. The site selected is that which today is number 95 Maple Street, where the Corcoran residence now stands. At that time the street was designated as "The road from State street by Samuel Orne's to Mill street near David Ames' house", but as more and more homes were built on the highway, the selectmen, in 1826 ordered that the way be called Maple Street. The plot selected extended easterly to what became School Street, and westerly it crossed the road and extended down the hill to where Dale Street now is. At the easterly end was an orchard while the westerly hillside provided pasturage for the family cow. There Mr. Howard died in 1849, at the age of fifty-eight, and in 1857 the property was sold to James D. Brewer and in time it was inherited by his daughter Mrs. Luke Corcoran. To make way for the present residence, the house was moved in 1889 to the rear of the lot where it became 100 School Street, and there it stood until demolished in the spring of 1946.

In 1820 Benjamin Day of Springfield, then thirty years old, married Frances Dwight, daughter of James Scutt Dwight, also of Springfield. He had graduated from Yale in 1812 and at the time of his marriage was cashier of the Springfield Bank. He had a prosperous and varied career, including a short experience as a Wall Street broker.

The site selected for his home was the plot next south of the Howard home, being what is now 111 Maple Street. That the house should be the equal of any in the village of 4,000 inhabitants, he also chose Simon Sanborn as a builder. Eventually this also became the property of James D. Brewer and so passed to Mrs. Eunice Brewer Smith, widow of Dr. David Paige Smith, who in 1890 built the present house, known to the present generation as the Harry G. Fisk residence. To make room for this newer house, the Benjamin Day House of 1820 was also in 1889 moved to the rear, becoming 102 School Street, and there it also stood until demolished in the spring of 1946.

These two houses had a number of points of real interest to the modern architect. The Day House showed some unusual carving about the front entrance and a delicately designed spiral stairway. Long windows reached from floor to ceiling. These were glazed with three sash each, one above another and controlled by chains and weights, allowing easy access to the outside. Both houses showed early examples of what in Western Massachusetts were variously called piazzas or porches or more properly, verandas. In Berkshire county, where the Dutch influence is often quite pronounced, the word stoop (stolp) is occasionally heard.

Mrs. Frances Dwight Day, wife of Benjamin Day who built this house for his bride, was a daughter of James Scutt Dwight and

his wife Mary Sanford who was the mother of three sons and nine daughters. She was married in 1794 and until the death of her husband in 1822 her home was at State and Dwight streets, where the Victoria Hotel now stands. By 1836 she apparently had tired of life in the swamp and to be nearer to her children, she engaged the incomparable Simon Sanborn to build for her a new home at what is now number 69 Maple Street. So well did the builder carry out his part that the house still stands, in the pleased occupancy of Dr. Theodore S. Bacon.

In 1836 the First Baptist Society built a church building at the corner of Maple and Mulberry streets, but it was outgrown within ten years and was sold to the Roman Catholics, who moved the building to Union Street, a few rods east from Main Street, where it was christened St. Benedict's. This was the first Catholic Church in Springfield and had at one period a membership of eight hundred.

The small factories operated by the stream where Avon Place now is, continued for a time, but when State Street was altered to its present grade, the discarded soil was used to fill the brook and pond and so create Avon Place. Thereafter, Maple Street was a residential thoroughfare.

Chicopee in 1834

The beginnings of industrial Chicopee were noted by a reporter of the Springfield *Republican,* who commented as follows:

"In a ramble about town the other day, we were agreeably surprised at the progress of the manufacturing establishments on Chickopee River, particularly those at Cabotville. We were informed that there is more buildings erecting on this river than at any one year previous. The Chickopee is evidently destined to be the seat of immense manufacturing interests. There are extensive and excellent mill powers between Jenk's Factory and Chickopee Factory, not yet broached. The picturesque and romantic scenery all along the Chickopee, adds much to the beauty of these bright and busy villages. At Chickopee Factory all the mills continue in operation; but we noticed no new buildings going up, except the large Hotel of Mr. Adams.

"Cabotville is situated about half a mile below Chickopee Factory. The Springfield Locks and Canal Company supply the water power to the establishments located here. This is what distinguished the place from Chickopee Factory; a field being thus opened to various enterprises of companies and individuals, it must soon become one of the largest manufacturing villages in New England. Its present population is between 6 and 7 hundred, and in six months it will exceed a thousand.

"The Cabot Company have just completed a very large Cotton Mill, and commenced operations. Their principal boarding houses will consist of six large blocks, in two parallel lines, with a road in the centre. Three of these buildings are finished and occupied, and the other three are in fast progress. Messrs. Sanborn and McClallen,

builders for the Company, began and completed a boarding house in the month of March. The buildings are principally of brick.

Mr. N. P. Ames's Edge Tool Factory is located here, and may be recognized by a golden sword on the cupola. Mr. Chapin, the Stage proprietor, is also building a grand Hotel at this place. Rights have been sold for a Bobbin Factory and a Grist Mill, which will soon go into operation. There are already stores here, in fine brick buildings, the contents of which would equal in extent and variety some of the largest in town."

Northampton's Cemetery

By Mary Brewster

Northampton has one of the historic cemeteries of New England; one among the longest in continuous use. As this town, especially in the eighteenth century, was the home of an unusual number of persons of national influence, its number of notable graves is also unusual.

It has been written, "It is no exaggeration to say that the influence of Northampton, both religiously and educationally, has extended not only through the United States but to the uttermost parts of the earth."

When Northampton was founded thirty-four years after Plymouth the nearest settlements were at Springfield and Windsor, Connecticut. It was mostly wilderness to Massachusetts Bay and unsettled frontier to the north to Canada. In the next century this area saw much of the scattered fighting of the French and Indian wars in both the rigors and romance of which Northampton men had active part. Some of these are buried in this old cemetery though the graves of most of them are lost as are those of all of the sixteen original settlers.

In 1661, "10 acres at the farthest corne of Ye Sequestered Mynisters lot on Pine Tree plain" were set off for "a public burying ground."

Since then the funeral processions of ten generations have passed the oldest house in Northampton to Bridge Street Cemetery. Ancient pines guard the oldest section where little paths meander among low, time-stained stones. Some dates go back to the 1500s in England. Persons who died before 1661, if not buried on home lots, were buried on Meeting House Hill and moved to the cemetery in 1680.

Overshadowed by a later monument are the original head and foot stones where Lt. William Clarke was buried in 1690. A recently placed boulder is over his contemporary, Elder John Strong. Outstanding settlers, these men now are notable for descendants. Strong's are over 30,000. Above one of the Clarkes buried in 1780 the stone reads,—

"Youngest of 6 sons and 5 daughters and survived them all. From the sons have descended 1158 lineal heirs."

Strong's most famous descendant Caleb was eleven times governor of Massachusetts and one of the framers of the Constitution of the United States.

Nehemiah Allen, ancestor of Ethan Allen, was buried here in 1664. Thomas Hosmer "He dyed in 1687." The stone of Rowland Stebbins notes that he "came from the west of England to Springfield about 1636 and removed to Northampton and there died in 1671."

The sudden death of his son John was commonly attributed to witchcraft. The Judd manuscripts say: "It was also stated that a large number of women were summoned by Joseph Hawley to examine and touch the body, intending to discover the witch." Supposedly blood would flow from the body when touched by the guilty one.

Generations of Hawleys distinguished Northampton and several of them are here. Major Joseph, specially famed among New England leaders of the Revolution, was the most celebrated. His documents of that period, as well as his correspondence with his cousin Jonathan Edwards, are treasured by historians.

Patience Miller's monument recalls her as first among women physicians in this country. Gen. Seth Pomeroy's stone is interesting to students of gravestones for its elaborate carving-crosses, crown, crossed swords, angels blowing trumpets and flags marked "B. G."

Several graves are of colored persons who lived in Northampton families. Among these:

"Mattie, the slave girl."

"Sarah Gray, a colored woman. Erected by those who experienced her faithful services."

"Sylvia Church who for many years lived in the family of Mrs. N. Storrs. She was for many years a member of Mr. Williams's church and, we trust, lived agreeable to her profession and is inheriting the promise."

On a family lot also is buried: "Sally Maminash. She died in 1853 and was last of the Indians here."

Two unmarked graves should be of Arthur Bennet and Richard Stillton sent to the gaol in Northampton after being captured from the British ship *Falcon* in Boston Harbor during the Revolution. A stone to "A Polish exile—Erected by his pupils" is of a date to suggest that he taught at the famous Cogswell and Bancroft School attended by so many boys later distinguished in American life and literature.

Northampton's eminence educationally is reflected by the number of college presidents, including those of Bowdoin, Smith and Princeton, and "beloved teachers" buried here.

On Stoddard Knoll, where early ministers are buried, are graves of some of New England's once widely noted divines. Large twin tables, such as memorialized persons of distinction, mark where Solomon Stoddard was placed. Wealth, tolerance, charm and gracious living in a primitive time gave this man from Boston town leadership for nearly sixty years. In like grandeur is his wife, Hester (Mather)

Stoddard who came to Northampton as bride of the first minister and shared the town's growth for all but five of its first eighty years. Eunice Williams, killed in the Deerfield massacre, was her daughter; Jonathan Edwards, a grandson, and Aaron Burr a great grandson among her many prominent descendants. Near her impressive monument a simple shaft marks the grave of her first young husband who "did not die without the deepest lamentation of all the churches setting along the river Connecticut."

Though Jonathan Edwards died at Princeton a cenotaph to him is among graves of his family here. Two of these close an old romance: That of David Brainerd, "missionary to the Indians in New Jersey" and Jerusha, seventeen-year-old daughter of Edwards, whose death quickly followed that of Brainerd to whom she was engaged.

James McCallum, superintendent of Northampton cemeteries, has a list of over thirty ministers buried in this one cemetery. All the early ministers are among these. For nearly two centuries their periods of service were usually between fifty and sixty years. John Hooker "died of smallpox in the 49th year of his ministry." Solomon Williams ministered for fifty-six years, "his spirit ascended in sweet peace to the sanctuary on the morning of the Sabbath." John Hunt died in the Hunt Mansion (now a Smith College house) in December, 1775, "the hope of his parents, his native town, of Boston and of the New England churches." His monument was erected by his parishioners of the Old South Church, Boston.

There is a memorial to the Scottish divine, Thomas Chalmers, projector of the Free Church, and to missionaries and ministers who met death, sometimes violent, in remote countries. One was "killed by the Battahsin Sumatra." Accidental deaths include "Shipwrecked off the coast of Ireland"; "Slain by the Indians" (the latest in 1708); "killed by lightning"; "instantly killed by the fall of a tree"; "by the fall of a clock weight"; "perished in the woods"; "perished in a hard snow storm"; and "Jonathan Allen slain as he was hunting in the woods on the seventh day of January, 1780. The duties of a parent, and a faithful and brave officer of the Continental army were discharged by him."

Major Allen was home on a furlough from the army in which several of his brothers were officers. The Northampton Daughters of the American Revolution was named for their mother.

As there is pathos in that simple slab among the great of Westminster Abbey, "Jane Lister—Dear Child"; so here grief cries from a stone,—"Benja—Our dear little boy." Another mourns: "He shall have thee my own, my beautiful, my undefiled. And thou shalt be his child." More explicitly over one who lived but a day:

"From womb to tomb."

An epitaph such as,—

"The wise, the just, the pious and the brave
Live in their death and flourish in the grave",—

has some aptness here, when is realized the extent of the "flowering" of a single New England town.

Others besides the sextons have been impressed by "the fine families buried here", and these guardians of acres where are stored such strata of memorable living have much to relate to visitors who return from wherever the seed of Northampton has scattered.

Various leaders today, including the President of the United States, have ancestral links with earlier leaders whose graves are here.

"It is a secure past and a proud one. Notable have been the men and women who best represent old Northampton."

Northampton's observance of Constitution Day was at the grave of Caleb Strong.

Buried here are Harrison Holland, father of J. G. Holland; Henry Abbey, theater manager; John Clarke, founder of the Clarke School for the Deaf; Judge Forbes, founder of the Forbes Library and a presidential elector in 1856; Edward Lyman, donor of the first municipal theater in the United States; and Benjamin Lyman, who introduced mining engineering into Japan and whose life in that country recently has been written by Gumpel Kuawada, whose school-days were passed in Northampton. It has been said that at every banquet of mining engineers in Japan a toast is drunk to Mr. Lyman's memory. Visitors from Japan yet place flowers upon this Northampton grave. Also buried here are several Dwights, a Northampton family for generations leaders in educational and social life. Two of these were early presidents of Yale. Margaret Dwight's stone was erected in 1845 "by pupils of the Gothic seminary". Whitney's, famed geologist, is a boulder once brought by ox-cart from Slough Hill and left in his yard by jokesters, who had heard his remark that he would like it over his grave.

The grave of John French, so many years manager of the Mt. Holyoke House, is marked by a boulder from that mountain. Gen. William Lyman, consul to London after the Revolution, is memorialized here though he is buried in Gloucester Cathedral, England. His home in Northampton is still used.

The Bates tomb in the seventies was considered "one of the handsomest in New England" and an art treasure of the town. Northampton now has various cemeteries but older time residents are still brought at the last to "Bridge street burying ground"; the study of which is like turning back the pages of a closed book of lives that successively have made the town.

Modern Deerfield

By Thomas W. Merrigan

The village of Old Deerfield, resting quietly along the banks of the swift Deerfield River, is one of the few remaining symbols of early America that have survived a sweep of modernism in rural New England.

Unlike other sections of the nation which have moved ahead under the wheels of progress, this little community seems to have reversed the trend in preserving the colonial atmosphere for which it is famous.

Deerfield cannot be classified as modern, for it is still representative of the days when early settlers fought Indians and endured rigors of frontier life in their grasp for freedom denied them in the Old World. Centuries-old homes still line Old Deerfield Street and still hold the charm of the period when they were first built.

For a time it was feared these old buildings would eventually disintegrate with the passing of years and thus would disappear the only true expression of early American living. However, a broad restoration program started some 20 years ago has developed into a rejuvenation project similar to Williamsburg in Virginia, where the Rockefeller millions restored that old town to the same setting it knew 200 years ago.

Though on a more limited scale, the same type of transformation has taken place in Old Deerfield.

Henry N. Flynt, a wealthy corporation lawyer of Greenwich, Conn., and Deerfield, is one of the principal figures in this expansive project. He has purchased several of these seemingly depreciated and valueless homes and had them rebuilt to the styles and characteristics which they knew when first constructed. While additions and repairs by generations of owners has made his restoration task more difficult, it is also simplified in other instances where the houses have changed very little over their centuries of age.

The work of restoring these old homes is not as simple as a glance might suggest. Long hours of work by trained researchers, quests for old hand-hewn lumber and many other problems must be solved before the contractor is permitted to start on one of the ancient dwellings.

President of the board of trustees for Deerfield Academy, Mr. Flynt has many pleasant memories of visits to Deerfield as a boy and since then his interest in the village has intensified. Now he is attempting to preserve for posterity, the finest examples of the pre-Revolutionary War period.

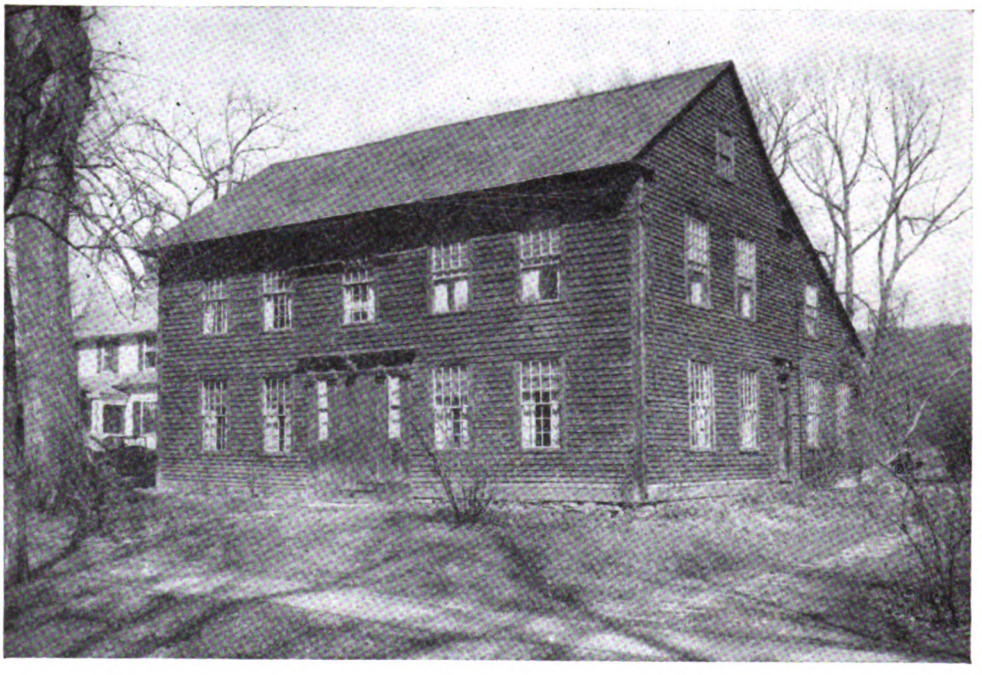
He has spent thousands of dollars in the purchase of the old houses and for their restoration. It is known that in some cases he has spent $15,000 for a house, while unofficial reports show that close to $100,000 went into the reconstruction of one single house, that being the Parson Ashley house.

Named after a fiery young minister, the Parson Ashley house was opened for public inspection after a year of work on it by the William Edward Gass Company, noted for its colonial restoration. The Parson was ordained second minister of Deerfield in 1732, even before his twentieth birthday. He was one of the few outspoken Tories in Western Massachusetts and his old home is now the attraction of visitors from all parts of the nation.

Mr. Flynt has been assisted in his program by old residents who are able to recall styles of many years past as well as by authorities

from Boston and New York museums in an effort to accurately picture the structures as they were in original form.

He has also been assisted by William E. Gass of South Deerfield, owner of the William Edward Gass Company. Mr. Gass first became interested in colonial architecture when he was employed in the firm of William Gass and Sons, owned by his father several years ago. The latter concern is responsible for creation of two important replicas which will be described later.



(Courtesy of Pioneer Valley Association)

Allen House, Old Deerfield

Mr. Gass has given years and years to the study of early-American architecture and through his thorough knowledge of the work, has done a creditable job in actually directing the reconstruction.

As he explained, restoring Deerfield's old houses is indeed very similar to catching a criminal by scientific police methods. There's the same careful search for clues, the same resort to reference books and in many cases plain theory.

"What would I have done if I were in the builder's place?" Mr. Gass has often asked himself as he examined old structures in preparation for changes.

Most often, the alterations were made without record and the restoration work must be planned under such a handicap as the dis-

appearance of chimneys and the substitution of separate chimneys—with the resultant rearrangement of downstairs rooms.

Removal of exterior and interior boards often reveals the original shape or covering of the building or room. When the clapboards were taken off the Delano house, for instance, Mr. Gass found that the house had first been boarded with wide planks, grooved in the middle lengthwise with a plane to give the affect of two boards where there was actually only one.

Inside the same house, workers discovered exactly what Mr. Gass expected to find—a narrow stairway directly in front of the front door which had originally been built against the huge central chimney to give access to the second floor. Light spots where the stairs had met the wall enclosing the chimney, showed the precise location and size of the stairway.

In determining the age of the various additions to the houses and the probable date when different room arrangements were made, Mr. Gass depends on such clues as the shape of the nails he finds or the sort of lath turned up under the plaster his men remove. The early builders used nails with diamond shaped heads. When the demand for nails grew great enough so that there was too little time to put four points on the heads, the builders switched to "butterfly nails" with two flaps. Then came the horseshoe nails, the heads made in a rectangular shape and finally the modern nails.

Those are only samples of the careful police work that must be passed on each house before it can be reconstructed the way it was originally. The additions and rearrangements of rooms described above are some of the difficulties facing the contractor before he can decide in what way the structure should be transformed.

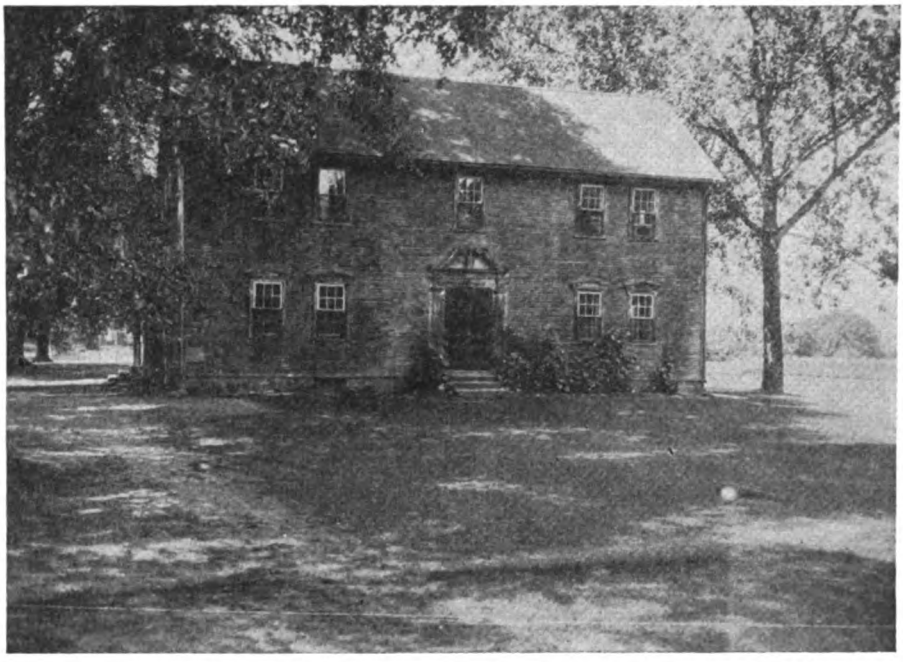
The old Allen house, located just north of Bement school, was returned to early 18th Century style in 1946 after it was purchased by Mr. Flynt. A Mrs. Bunker was owner of the lot in the original Dedham Grant, but the house itself was not built until 1705 by Simon Beaman. It passed from family to family down through the years, but during that time the interior had lost much of its coloniol effect by additions and renovations. Its early appearance was restored however, after careful examination of records and a check of the house. Each of the old houses is named after one of its foremost owners and the Allen house, for instance, was named after the Allen sisters who were noted throughout this section for their fine photographic work.

The restoration work now underway in Deerfield was started in 1929 when William Gass and Sons constructed a replica of the Indian House which was razed in 1848. Three years later, the Bloody Brook Tavern was taken down and moved from South Deerfield to its present location behind the Indian House.

But little did anyone realize in 1929 that these two projects were the forerunners of a huge restoration project that resumed nearly 15 years later.

The use of names of two contracting firms should be explained at this point. William Gass and Sons was a contracting firm, also noted for colonial restoration, but the firm has since been dissolved with retirement of its owner. His son William E. Gass, Jr., who has handled the restoration work, later established his own firm and is contracting the work for Mr. Flynt.

William Gass and Sons was preparing to build a house in Old Deerfield in 1929 along lines of the other colonial homes located there.



Parson Williams House, Deerfield

It was decided to build one as a replica of the Indian House in which American settlers were captured by Indians as it stood just outside the walls of the Stockade in a fierce battle with the Indians. The door through which a hole was chopped by tomahawks to allow Indians to fire into the house, now stands on exhibit in Memorial Hall as a tragic testimony of the Indian Massacre.

The Indian House was reproduced in as close detail as possible to the original, with wooden pegs used to fasten the old timbers which were treated to reflect an appearance of age. The man mainly responsible for construction of the replica is the late Mr. William Abercrombie of Deerfield and Brookline, who financed the project and made it possible to open the building for public inspection. Timbers for the structure were imported from Oregon, as New England no longer produces the timbers as large as the ones in the original house which was located in the rear of where the Brick Church now stands.

There is a huge central chimney with giant fireplaces on three sides, while the rooms throughout are panelled and the windows have old-style inside wooden blinds. The house contains furniture in keeping with its period, including an old-fashioned loom and spinning wheel which are used in one room by Mrs. Marian Drew, curator, and keep alive the spirit of colonialism.

In 1932, what later turned out to be the Bloody Brook Tavern, was swept by fire at its Main Street location in South Deerfield. Owned by the Hosley Brothers, who no longer had use for it, the fire-gutted building was inspected by William Gass and Sons for damage. A close examination revealed that the first story was constructed of logs, meaning that the building was what is described as a "block house", with a second floor added years after it was built.

Mr. William E. Gass, Jr., estimated that the old building was constructed about 1680 and was one of the few "block houses" ever built in the country. The name "block house" comes from the fact that the building, its supporting beams and general construction, is of hand-hewn logs. Mr. Gass further believed that the old building was at one time a part of Old Deerfield, but had been moved down to South Deerfield dating further back than any old-timers in the community could recall.

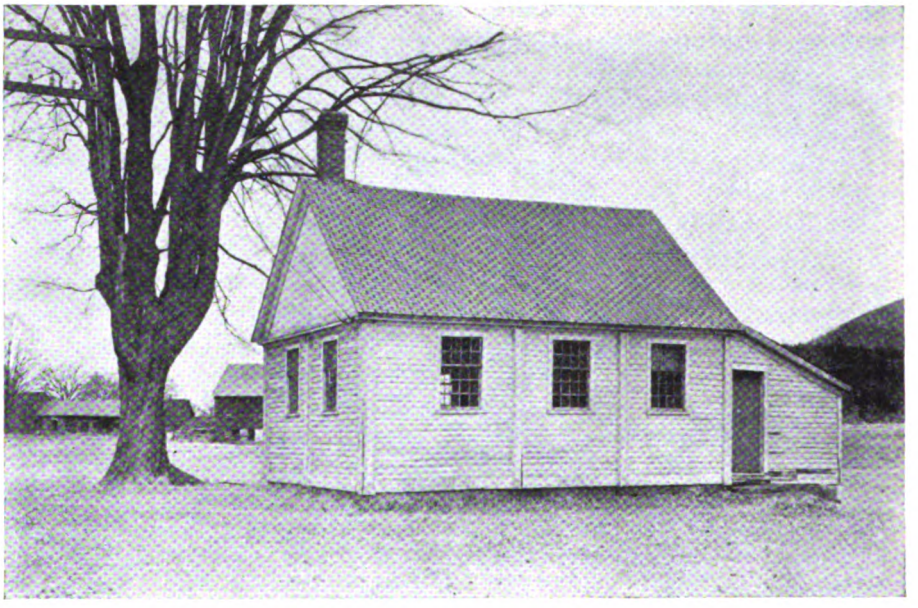
It was necessary then to first take it down and set it up again in Deerfield—behind the Indian House where it was also opened for public inspection and use of exhibits and sales. Mr. Abercrombie also made it possible for the tavern to be used for the same purposes as the Indian House and in 1932, the Indian House Memorial, Incorporated was established. This corporation directed the uses of the buildings and a board of trustees now includes William E. Gass, Sr., as president; William E. Gass, Jr., treasurer and Douglas Abercrombie, nephew of the benefactor, as secretary.

The tavern has been a home and work shop for various artists while now Mr. and Mrs. Edward Norman occupy it and create ceramic birds in natural colors, and fire pottery.

After setting up the Indian House in 1929 and the tavern in 1932, colonial restoration in Deerfield lagged for the next 13 years—with exception of the care that families who owned homes there, gave to them. Many families who owned colonial homes in the community did not want to see them become run-down, so they of course, exercised good maintenance of them. But their endeavors could not be classed as part of the overall restoration work.

Post-war restoration first began in 1945 when Mr. Flynt had the Pink House restored by William Edward Gass Company; next was the Allen House, now occupied by Mr. Flynt when not at Greenwich or in New York City; then the Parson Ashley House which was moved nearer the street after part of which was used for a tobacco barn; the Lamb House; the Delano House, owned by Deerfield Academy and the Manse which is also owned by the school and situated across from the big Brick Church.

Mr. Flynt, however, has not been alone in his restoration work. He has been joined by Deerfield Academy which has purchased several old buildings on the street and financed their return to colonial designs. Also the Pocumtuck Valley Memorial Association, which owns the Frary House, has cooperated. For the first time in more than a quarter of a century, the association opened the Frary House to public inspection. It is a noted building, being the spot where



Wapping School, Deerfield

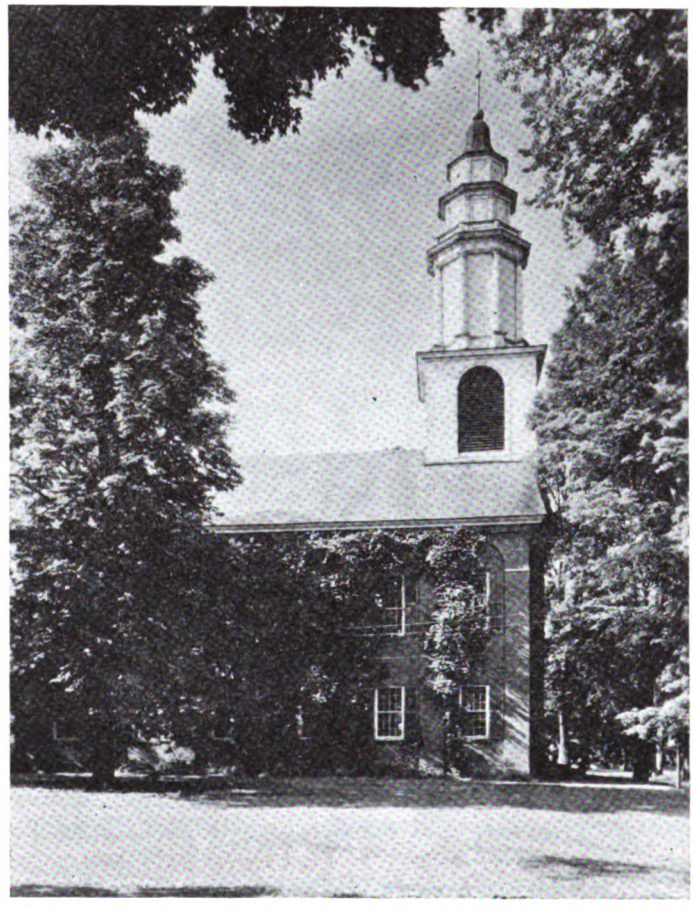
trustees of Deerfield Academy first met in 1797 when the school charter was signed.

To illustrate the sturdiness of the old houses, the Manse, for instance, was built in 1768, after its builder waited twelve years to obtain all knotless boards for its construction. Mr. Gass said that the lumber in that building, to this day, is the most perfect and clear pine hat he has come across in his work.

Entirely sincere in his hopes that Deerfield will remain colonial as it was more than 200 years ago, Mr. Flynt has begun construction of a new fire station that will be adaptable to the environment and which he will give to the fire district upon its completion in the summer of 1949. It is the forerunner of a group of civic buildings, including a new post-office, that he will give to the town—all coinciding with the architectural layout, now existing.

After more than 250 years of worship in different churches, the people of Deerfield have united their Unitarian and Brick churches into The First Church of Deerfield.

Pealing of bells on June 28, 1947, told the people of the community that legislative approval had been given a bill for merger of the two parishes and a few months later the bond was completed. Although for the past 17 years, the two churches had been worshipping under one roof, legislative approval was necessary to combine church properties.



Deerfield Church

Church history in Deerfield dates back to about 1675 when Samuel Mather and John Russell were ministers for a brief period. But it wasn't until October 17, 1688, when the First Congregational Church was formed with Rev. John Williams as its minister.

Pastor of the First Church of Deerfield when it was formed and largely responsible for the combination is Rev. Herbert R. Houghton, Jr.

Deerfield is noted for many things, among them The Deerfield Society for Blue and White Needlework.

This was formed under two artists, the Misses Ellen Miller and Margaret C. Whiting who came to Deerfield in the late 1800's. Soon after arriving in Deerfield, they became interested in antique pieces of embroidered bed spreads, curtains and table covers which were treasured possessions of old families but dangerously near disintegration because of age. The pair copied and revised the designs of many of the old works and found themselves interested not only as artists but also in the stitchery which in many instances was from the old church embroideries of England.

The notoriety of the society increased and people from all sections of the country came to purchase the pieces for their homes. Failing health after 30 years or so, ended their work in that activity but they saved the choicest pieces for a permanent collection which was placed on display for the first time in its entirety in 1948.

Miss Miller died in 1939 while Miss Whiting died in 1947. They had written a book, *Wild Flowers of New England* and compiled the illustrations in which the colors are realistic and details are accurate.

In addition to its fame for examples of early American living, Deerfield also has a fine reputation for being an education center. It is the location of three private schools, the largest among them being Deerfield Academy—a college preparatory school more than 150 years old.

The other two are Eaglebrook and Bement Schools, both noted institutions and attended by pupils from many varying sections of the country who come here seeking high levels of learning.

Deerfield Academy, which started as a simple little school back with the issuance of a charter on April 18, 1797, has grown in leaps and bounds, especially within the past twenty years. It is the hub, around which nearly every activity in Deerfield, revolves. It is respected as one of the outstanding college preparatory schools in the nation, while its headmaster stands second to none.

Frank L. Boyden has been in charge of Deerfield Academy since he first assumed the position as its principal in 1902, and is now the headmaster. It has been under his cheerful and keen supervision that the academy has grown to the proportions it has reached in the field of education.

Deerfield Academy reopened its doors in the fall of 1931 with a vastly enlarged campus, including a new main building for the headmaster's office, administrative offices, class rooms, a library and study hall.

It climaxed a $1,500,000 fund raising campaign which made possible construction of a new administration building, practically on the site of the old one, which had been condemned by the state. While its rooms were designed mainly for small classes, they are larger than generally found, well ventilated and have perfect lighting—a far cry from the old and archaic buildings that once used to be Deerfield Academy.

On the north end of the building is a large study hall, the headmaster's offices is in the center portion, while a huge browsing library

lines the south end of the building, adjoining the administrators' office. Students passing from one class to another meet the cheerful glances of Headmaster Boyden as they pass through his office, which has a colonial fireplace with andirons. The school has successfully attempted to combine as many colonial features as possible in its expansion program—thereby blending with the archaic surroundings throughout the rest of the community.

(Photo by the Springfield *Union*)

Making "Shakes" for the Bloody Brook Tavern Restoration, Deerfield

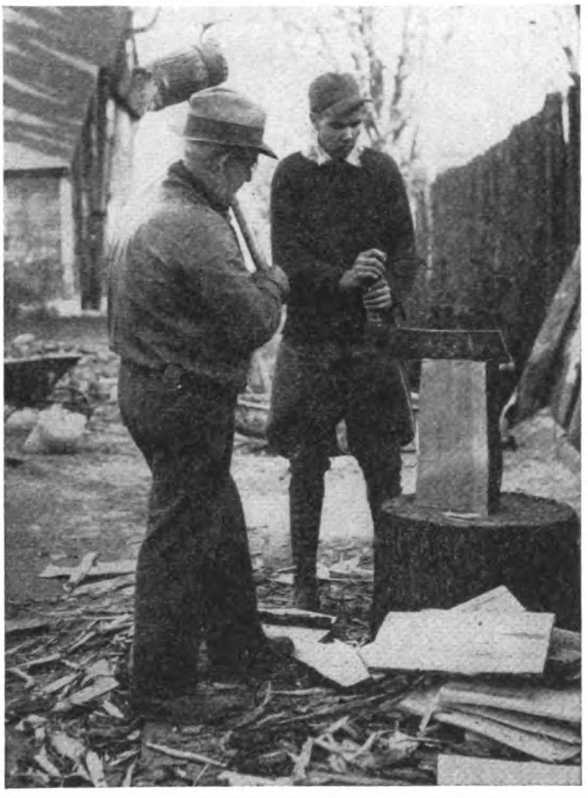
But Deerfield seems to have an atmosphere all its own, different from the campuses of other schools in the country. Headmaster and Mrs. Boyden are mainly responsible for the cheery spirit of friendship that is noticeable as one visits the school.

Also built the same year the administration building was constructed is an immense gymnasium which is of the same brick exterior and other materials that went into the former structure. The gym, facing Albany Street which runs through the school campus, includes three full sized basketball courts, a postoffice, store, facilities for gymnastics, boxing, wrestling and a limited amount of track.

The gym is one of the best equipped buildings of its kind in this section and its splendor is climaxed by a fine swimming pool which occupies an entire wing. The pool was given to the school by

Chandler Beach, Sr., of Chicago—father of a former Deerfield student who was drowned in 1927 in a vain attempt to save the life of a friend. Mr. Beach attended the dedication ceremonies with his daughter and presented the pool to Mr. Boyden in memory of his son.

The next big step in Deerfield Academy expansion came in 1932 when a contract was awarded for a $100,000 science building adjacent to the administration building.



Making Shingles With 17th Century Frow and Mallet for the Old Indian House in Deerfield

Money for the project was given by the late Mr. J. M. A. Sheldon, a member trustee and long interested in the welfare of the school. The building was in memory of his wife's late father, George A. Arms of Greenfield who was a Deerfield student and keenly interested in science during his life. He was long a prominent Greenfield business man and died in 1897.

The building harmonizes with details of all other buildings and is constructed of the same materials.

Mrs. Sheldon was associated with her late husband, George Sheldon, in his work in Pocumptuck Valley Memorial Association and in his activity as Deerfield Historian for which he was well known. Her first gift to the school was in 1912 when she presented a Girls Club building with the hopes that it would emphasize the training for the female students.

New construction at Deerfield Academy lagged for the next 15 years until the summer of 1947 when contracts were let for a new infirmary and dining hall, after raising half of a $2,000,000 post-war building fund campaign.

In contrast with the 1929 drive when 12 donors contributed a million dollars, the voluntary committee raised the same amount from 1,200 persons.

The new infirmary replaced the entirely inadequate facilities that were at hand in a house which was often over-crowded and in

many instances unable to handle the flood of student-patients brought in during some of the epidemics that occasionally sweep the school. It was designed by William and Geoffrey Platt, New York architects, who adapted its design from a colonial house in Charlestown, New Hampshire.

The new infirmary contains rooms for 18 patients, offices and examination room for the doctor, including X-ray and fracture rooms and a solarium on both the first and second floors. Each will be available for additional beds in the event of an epidemic, while a library will also be provided on the first floor.

The new dining room is an immense structure, able to seat 500 persons comfortably and has all modern facilities, including electric-eye doors which enter into the kitchen. It also blends with the other buildings with a clean, polished brick exterior and huge bay windows on the south side of the banquet room.

Both the dining hall and infirmary were completed in the summer of 1948 and they were ready for school use with its opening in the fall of that same year.

Still in the planning stage, and dependent upon an alumni campaign for an additional million dollars is a building for non-athletic activities to memorialize the 61 Deerfield men who lost their lives in World War II. The structure would probably include an auditorium large enough to accommodate the students, faculty and guests, in addition to rooms for extra curricular activities. These may include the Glee Club and Band, a manual training shop, an art studio, and an alumni office.

Also planned for the future, is a dormitory, but the location of these buildings is not decided.

The school celebrated its 150th anniversary on April 18, 1947.

Just as the trustees gathered for their first meeting in the Frary House on April 18, 1797, so too, did the present board of trustees meet in the same spot and have the minutes of the first meeting read again. George Washington was president when the school was formed and Samuel Adams was the governor of Massachusetts.

The 150th anniversary was celebrated with a colorful pageant which depicted the signing of the charter by Governor Adams and other phases which were so important to the school's present prominent place in American education.

If the early settlers, who must have many times thought their suffering was in vain, could see Deerfield now as an important educational center, where the traditions have been preserved from one generation to another, they would indeed rejoice in knowing that their efforts were contributed to something as worthwhile.

Chapter XLVI

Historical Miscellany

Last Indian of Northampton

By Mary Brewster

A BIBLE in the Forbes Library and a chair in the home of Mrs. Murray Strong are the remaining tangible evidences of the last Indian to live in Northampton, Sally Mamanash. A stone like the other marbles about her shows where she is buried in the Bridge Street Cemetery among members of the Clapp family who shared their earthly home with her. The stone records that she died in 1853 at the age of eighty-eight. "The last of the Indians here—a pious woman."

This piety and exceptional gentleness and sweetness, characterizing her later life, is the repeated substance of what can be gathered of personal reminiscence.

Until quite recently there were in Northampton a few persons whose first years coincided with the last years of this Indian woman who was ten years old before the outbreak of the Revolutionary War. But the remnant of what is personally remembered concerning her is in recalled memories of parents or grandparents.

It is known that she was a niece of the celebrated Indian preacher, Occum, and daughter of Joseph and Elizabeth (Betty) Mamanash (sometimes spelled Mamanach). Betty and Joseph came to Massachusetts from near Norwich, Connecticut, and were not of the tribe indigenous to Northampton but of the Mohegans, early enemies of the Connecticut Valley Indians. Both died at Northampton and were buried on "Pancake plain," earlier name of the Hospital Hill region of Northampton.

They had two children, Sally apparently being the only one of whom there is memory.

In 1779 Betty, then sixty years old was "stoned to death by boys of Northampton." That almost incredible statement is in *Reminiscences* of the late Sidney Bridgeman, of the old Bridgeman book store and a grandson of the Warham Clapps who sheltered Sally to the end of her long life.

Mr. Bridgeman remembered Sally of whom he has recorded: "She never attended school but grew up with native wit and sharp-

ness and when taken into our family was a wild, passionate, wilful yet a kindly, loving Indian girl. She learned to read the Bible and psalm book but, we are assured, could never read a word from a newspaper or any other book. Her benefactor was once very sick and given up by the pastor and physician. Sally was missing all day and when found the next morning she was radiant and joyous in marked contrast with the deep sadness of preceding days as she saw her friend apparently fading away. On being asked by one of the daughters of the house the reason of her joy she cried, 'Your mother will live! She will not die! I know she will get well. I have seen Jesus and asked him to cure my dearest friend and he said he would!' That day Mrs. Clapp began to mend."

When converted to Christianity, she was fifty years old. This conversion with that of seventy other persons, was in one of the revivals that from time to time so aroused the "Old Church" of Jonathan Edwards. This was in 1815, during the fifty-six years' charge of "Parson" Williams.

Grace triumphed over Satan and she rose into a sweet saintly life. She became an "examplary Christian" and "died in the faith and hope of the gospel."

She died early in January during a week with "weather as mild as April." Kindness and loveliness of life seem to be rather exceptionally a part of all recall of her.

After her mother's death, the Indian girl supported herself by spinning and weaving for Northampton families.

Just when and how she became a member of the Clapp household is not known, but she is supposed to have been an assistant in domestic service.

A newspaper notice at the time of her death reads: "Under the infirmities of years she found an excellent Christian friend who took her into her own family saying, 'As long as I live Sally shall be provided for'."

After Mrs. Clapp's death, her son, Edward, and his wife continued to the last, the same care. The *Gazette* notice continues:

"These families of benevolence have an ample reward. Not merely the remembrance of their own good deed, but in the effect of the prayers of which were offered continually for them by the aged disciple of the Lord who was the object of their kindness."

The Judd manuscript notes:

"The Mamanash family are well known in Northampton and many reminiscences remain concerning Sally who was known to many living there."

The Northampton of the early fifties, which Sally had seen grow from a settlement to a proud town of comfortable homes, legal and literary eminence and preponderant aristocracy both gracious and austere, was the Northampton where Wendell Phillips sojourned,

Henry Ward Beecher lectured, Jenny Lind sang and Christopher Clarke conducted parties to Springfield for extra entertainment. People discussed anti-slavery and the enormous profits of Harriet Beecher Stowe from *Uncle Tom's Cabin.*

In earlier days, when she was a familiar figure on its shaded streets, Sally may have looked into the face of Ralph Waldo Emerson and of Daniel Webster; seen boys, later noted men, enjoying the outdoor life encouraged by the Round Hill School when Joseph Cogswell was introducing Continental theories of education and Bancroft was writing his *History of the United States.* She perhaps saw David Lee Child and Lydia Maria Child experimenting on their farm on the road between Florence and "Pancake" and undoubtedly watched the pageant of fashionable guests with their equipages and slaves bringing gay life to the town's celebrated hotels, water-cures and boarding schools.

The Warham Clapp home where she lived and died was one of the roomy old white houses of South Street not long ago removed to make way for the Lathrop home now fronted by a lawn where the house stood close to the street.

Clapp descendants of Capt. Roger Clapp, of Dorchester, were among Northampton early settlers and ever since pioneer days Clapps and Strongs have lived on this next oldest street of an old town.

From the Warham Clapp house came the Sally Mamanash Bible and the chair treasured by Mrs. Strong, whose grandmother was a child in the old homestead when her mother was sheltering Sally and who retained vivid pictures of the old Indian woman usually sitting in the chair with the cherished Bible in her hands.

This Bible, now in the Forbes collection of Bibles, is an 1815 edition of the large, calf-bound style with print kind to old eyes. It has the bordered blank pages between the Old Testament and the Apocrypha used for family record. There are no entries of family on the yellowed blank pages of Sally's precious book. But on one page, and elsewhere occasionally, are faintly pencilled scrawls such as a child makes in learning to write; slanting attempts at a signature. On one of these mid-pages, however, is inked, in the large elaborate fancy lettering style of old copy books, the name Sally Mamanash: establishing undoubted ownership.

The chair is a low one with ladder-back much like the straight chairs of individual owners in early New England churches. The splint bottom is slightly broken but purposely left that way because it is the original chair-seat.

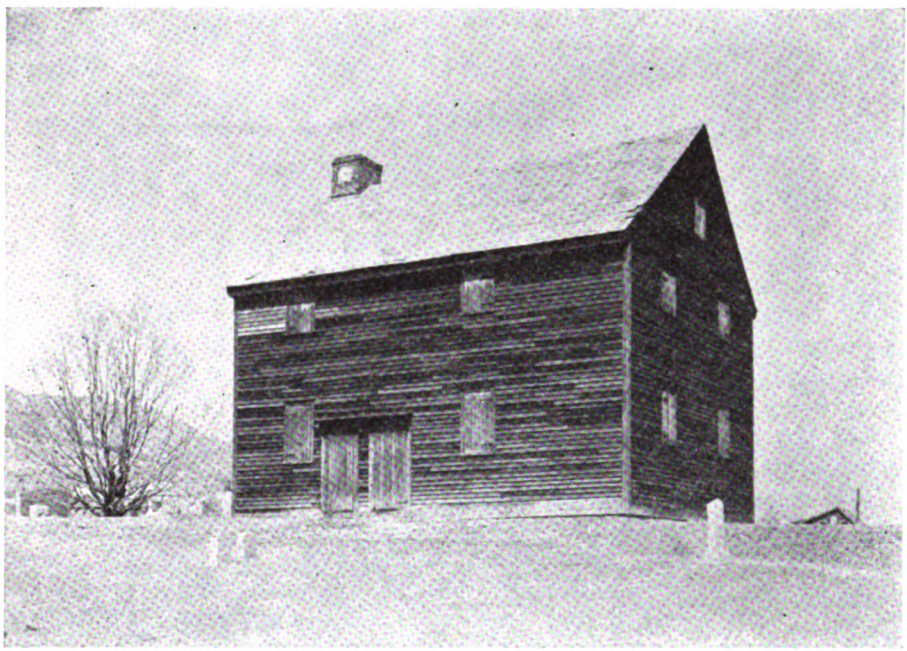
Betty Mamanash, who twelve years after the death of her husband was buried beside him, had marked his grave with a stone which remained there for over a century before being stolen. It was inscribed:

Joseph Mamanache
Died May ye XX 1767

Mr. E. Brahman, whose family formerly lived in that part of the town, recalls the stone as brown in color and marked with an animal resembling a turtle.

When it was stolen in 1884 an old *Gazette* states: "An outrage has been committed in this city that ought not to go unpunished."

The field where the Indians were buried, now owned by the state hospital, was owned by W. F. Arnold who left standing the group of



Society of Friends Meeting House, Adams

gaunt pines that long guarded the "Indian Grave" in picturesque and poignant contrast to the spot today where, in sunny bleakness below a stone-covered ridge, gone with the pines is the last trace of a historic burial place, unmarked and generally unremembered.

The cruel death of Sally's mother is not generally noted, but most likely was a fact from family tradition. She was the eldest sister of the Indian boy who became widely known as the Rev. Samson Occum. His superior abilities as a boy engaged the keen interest of Eleazer Wheelock, founder and first president of Dartmouth College, and active in efforts for education of Indian youth.

Occum was one of several boys living in the family of President Wheelock, who believed that the most successful conversion of Indians would be by members of their own race. Convinced of Occum's special fitness for this purpose and raising funds for it, President Wheelock had him accompany the Rev. Nathaniel Whitaker of Norwich, Connecticut, to Great Britain where, with great suc-

cess, he preached in the principal cities of England and Scotland, collecting nearly 10,000 pounds for the purpose.

He was the first Indian to visit these countries. His niece was the last Indian in Northampton.

The Tale of an Arrowhead

Some threescore years ago, a group of youngsters in the Connecticut Valley were avidly collecting what was then termed "Indian relics," the stone implements of the American natives, which they gleaned from plowed fields in their vicinity. To them, whatever was pointed was an arrowhead, although they came to distinguish between the barbed and the barbless types, recognizing them as hunting points and war points, respectively. Later they learned to classify many of the so-called arrowheads as knives, scrapers, and awls.

In that era it was not possible to learn all the answers from printed books, so these young men were forced to experiment by rule of thumb. They fitted stone arrowheads to shafts and were amazed at the short range of flight. If aimed at an object, the arrow quickly dropped to the ground because of its weight. Only at very close range was a direct hit possible. They could but wonder whether the Indian had some technique unknown to them, that gave greater precision and distance to his arrow.

The answer to this question, fortunately, was at hand, for thanks to the activities of the historical societies, there was available to them the literature of the seventeenth century, with journals, reports, and letters of early visitors to America. They read that in 1638, Captain John Underhill had spoken of "the Pequeats, Narragansets and Mohigeners, exchanging a few arrows together, after such a manner as I dare boldly affirm, they might fight seven years and not kill seven men. They came not near one another, but shot remote and not point-blank, but at rovers and then they gaze up in the sky and see where the arrow falls and not until it is fallen do they shoot again." Neither the *New English Dictionary* and Webster's definition for "at rovers—at random",—nor that of the *Century Dictionary*—"for height and distance, rather than accuracy,"—exactly fits this seventeenth century usage. The arrows were discharged high into the air to gain distance, but they were aimed as accurately as was possible in the circumstances.

This statement makes understandable the drawing of Theodore de Bry in 1590, picturing half a dozen Indians shooting at a distant enemy, with their arrows pointed upward at an acute angle. The English called this "shooting compass-wise." Traversing a long, high arc, only by the grace of God could an arrow thus projected hit its mark, but that was the best that could be done to achieve distance with one so heavily headed.

Such practice is familiar to those interested in the flight of projectiles. When the "Big Bertha" shelled Paris during the first

World War, students of gunnery noted with interest that it was aimed considerably higher than the forty-five degrees theoretically yielding maximum range. One explanation suggested was that at a greater altitude the projectile would be moving through thinner air, but perhaps it was merely considered that a plunging fire would be more effective. This is probably the explanation of the high-angle fire of the German guns shelling Dover in World War II, from across the channel, the shells, by some accounts, reaching a height of fourteen miles for a range of twenty miles or slightly less. For an elevation of forty-five degrees the height midway would theoretically be but half the range.

Roger Williams in 1643, said that "their wars are far less bloody than the cruel wars of Europe; and seldom twenty men slain in a pitched field, partly because when they fight in a wood, every tree is a buckler. When they fight in a plain, they fight with leaping and dancing that seldom an arrow hits."

So futile were their efforts that from the very first the English were able to note the course of an arrow and so dodge it. Bradford said that at "the place of the first encounter" in 1620, "a lusty man stood behind a tree within half a musket shot and let go his arrows at them. He was seen shooting three arrows, which were all avoided."

Mourt's *Relation,* 1622, states that "he was seen to shoot three arrows, which were all avoided, for he at whom the first arrow was aimed, saw it and stooped down and it flew over him. The rest were avoided also. Their arrows were headed with brass, others with hart's horn and others with eagle's claws."

The author of *A Relation of Lord Baltimore's Plantation in Maryland,* 1634, said that "their bows are but weak and carry not level very far".

New England's Prospect, 1634, states that "their bows be quick but not very strong. These men shoot at one another but with swift convenience, shun the arrow. Their arrows are made of young elderne, headed with brass in shape of a heart or triangle".

In 1577, while on his second voyage in search of the northwest passage, Martin Frobisher found that the natives "have some iron whereof they make arrow-heads, knives and other little instruments. Their arrows are of small force except they be very near when they shoot".

All of this convinced the young seekers after light that the marksmanship of the Indians was no better than their own. Nevertheless, their experience left them wondering whether during all the centuries while the Indians had occupied New England some one of their bright lads did not at least make an attempt to find a lighter substitute for the heavy stone head. Their reading added one important bit of knowledge that seemed to justify such a suspicion, for they found that Francis Higginson, writing from Salem in 1629, had said of the Indians that "for weapons they have bows and arrows, some of them headed with bone and some with brass." Of

the Indians at New Amsterdam, Wassenaer said in 1624, "the arrows they use are pointed with little bones, iron or copper."

Thereupon they began a search for arrowheads of such materials. They soon realized that those made of bone would long since have become but dust, but they were encouraged by occasionally finding one made of wrought metal. These latter were submitted to the wise men of the universities and the learned societies, who returned profound thanks. These arrowheads were most interesting, the youths were told, since they showed trade relations between the Indians of the Connecticut Valley and those of the Great Lakes, for they were of copper, and only at the upper peninsula of Michigan could native copper be found, suitable for such a purpose. This copper, the finders of the arrowheads were assured, was taken out in chunks, beaten with stones into flat plates, and then fashioned into the finished arrow points.

Such an explanation was far from satisfactory. The metal heads were as often of brass as of copper, and surely the Indians had not the ability to combine copper with zinc to produce brass. Moreover, when the heads were tested with a micrometer, they were found to be of the same thickness at the butt, the tip, the center and the edges. Here was a degree of precision hardly possible to persons working with stone hammers. It just was not within reason.

So with the years those growing young men continued their browsing among the printed pages. They found that Edward Johnson, writing in 1654 and apparently referring to the voyage of John Smith in 1614, said that "the seamen, furling their sails, came to anchor, manned out their long boat and went on shore, at whose approach the Indians fled, although now they saw they were men, who made signs to stay their flight, that they may have trade with them, and to that end they brought certain copper kettles."

On the St. Lawrence, on May 4, 1535, Cartier "presented Donnaconna with two brass kettles, eight hatchets and some knives and beads". In 1541, "our captain (Cartier), gave each of them certain small trifles as combs, brooches of tin and copper".

On the Massachusetts coast in 1605, Champlain spoke of "four or five sailors going ashore with some large kettles, prized by the aborigines above all articles possessed by the French".

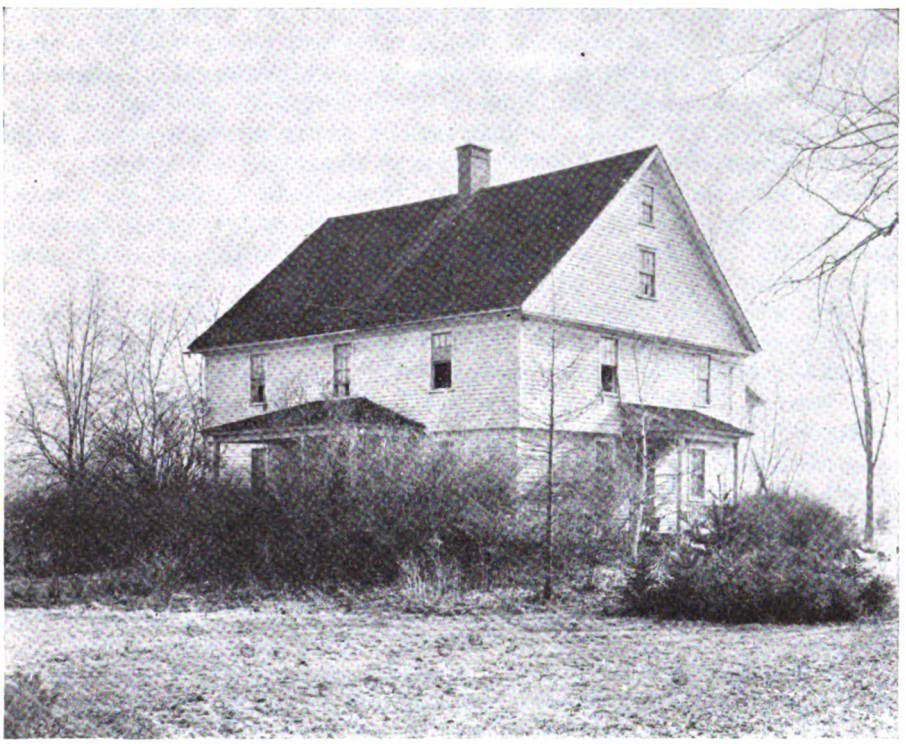
New England's Prospect, 1634, mentions "pots wherein they used to seethe their victuals before they knew the use of brass" and "large kettles which they traded for with the French long since and do still buy of the English".

In 1534, at Rhode Island, Verrazzano said, "The arrows which they use are made with great cunning and instead of iron, they head them with white jasper stone and hard marble".

With a history dating back to the Spanish pioneers, an ancient copper kettle now reposes in the home of Rhea J. Vernon of Lubbock, Texas. It was brought to him some thirty years ago by one Dave Mitchell, a Texas rancher. Exploring the hills one day, Mitchell stumbled across a partially walled-up cave, inside of which he found

the skeleton of the Indian in a sitting posture. Grouped around him were spears, bows and arrows, a half bushel of beads made from teeth and shells, a buckskin shield and the copper kettle.

This latter relic, despite its obvious age, was still serviceable, not a hole or crack in the sheet copper anywhere. Mitchell carried it back to his ranch and hung it in a mesquite tree. Vernon's father visited the ranch one day in 1933. He noticed the kettle, lying on



Smedley House, Williamstown

the ground, smashed flat. Vernon recovered the kettle, restored it to its original shape and it now occupies a position of honor in his home.

In contrast to the excellent state of the copper, the iron handle had completely rusted through.

In the Bangor *Daily Whig and Courier,* May 15, 1858, is the following item,

"Last Saturday, Augustus Vaughan of South Union, while ploughing near the shore of Seventree Pond, ploughed up the skeleton of an Indian. An Indian's axe, four copper rods about twelve inches in length, and the size of a pipestem and two arrow points, somewhat resembling the point of a butchers knife, were found deposited in the same place; there was also found what appeared to be the

band of a cap for the head, ingeniously constructed, having a cord around it on the edge, and being fastened by an innumerable quantity of small copper bolts, about three fourths of an inch in length and about the size of a very small quill."

Here was a clue.

The researchers, now aging, were still young enough to have a bit of imagination left. Whatever may be argued as to the mentality of the Indian, he certainly was adaptable with his body and his hands, being as imitative as a monkey. They thought of the native pottery cup, now in the Peabody Museum, at Cambridge, which they had taken from an Indian grave in Springfield in 1896. Though made of native materials, it was unlike a prehistoric vessel with a round or pointed bottom for standing in the ashes or on soft ground, but had a flat bottom for setting on a shelf or table. And wholly unlike a native utensil, it had a handle in exact imitation of an English cup. In size and in pattern it completely followed a European model.

They were confident at last that they "had all the answers" when they read Captain John Underhill's story of his experiences at Saybrook in 1637, during the Pequot War. Said Underhill, "A little before we set forth (from Saybrook) came a ship from the Dutch plantation. Casting anchor under the command of our ordnance, the master and merchant came forth, and sitting with us awhile, revealed that they were bound for Pequeat river to trade. Ourselves knowing the custom of war, that it was not the practice to suffer others to go and trade with them, our enemies, with such commodities as might be prejudicial unto us and advantageous to them, as kettles or the like, which make them arrow heads, we gave command to them not to stir."

They read further that David de Vries had said that at New Netherland, at a time of impending pillage in 1643, the Indians were persuaded to "let my little brewery stand though they wished to get the copper kettle in order to make darts for their arrows".

This seemingly justified the suspicion concerning the copper kettles of Captain John Smith in 1614. Kettles certainly loomed large in the mind of the Indian, for Roger Williams in his printed vocabulary, included the words *aucuck* for "a kettle" and *mishquockuk,* as "a red copper kettle". The latter definition does not, however, bear scrutiny. The root for "kettle" is indicated, as that for "red", but there is no element suggestive of copper excepting as "red earth". Literally, the meaning is "red earth kettle". Apparently a red kettle was, of necessity, or by common usage, one of copper.

Those Narragansett Indians had known European copper for more than a century before Roger Williams' time, for when Verrazzano visited them in 1524, they showed him "many plates of wrought copper" that could have been obtained only from explorers coming prior to the time of his own arrival. French and Dutch traders were on the coast at an early date and must have been extremely active.

Governor Bradford, in a letter of September 8, 1623, said,—"I know of my own knowledge many of the Indians to be as well furnished with good kettles, both strong and of a large size, as many farmers in England". In 1624, Wassenaer said of the New Amsterdam Indian, "our people must pay their respects to him with a kettle or an axe". In the Mohawk country, in 1635, the natives complained that "very often when we come to your places we do not find any cloth or sewan or axes or kettles, or not enough for all of us, and then we have had much trouble for nothing, and have to go back over a great distance, carrying our goods back again."

Francis Higginson's statement of 1629 concerning brass arrowheads was published in 1630, and undoubtedly was widely read at the time. There can be little doubt that the market for sheet metal among the natives was then noted by the merchants and traders of England. Roger Williams said in 1643, that the Indians "kill bass with their arrows, or sharp sticks, especially if headed with iron gotten from the English." Such iron most certainly did not come from kettles, since iron kettles were made of cast metal and not from sheets. Without doubt the Indians obtained from the English, sheet copper, brass and iron in the raw. With the European knives, hatchets, and scissors received in exchange for their lands, they could readily work such sheets. Men still living recall similar tales of the plains Indians in the last century. As wagon trains of the pioneers were raided, the steel tires from the wheels of burned prairie schooners were often looted for arrowhead material.

The settlers and the traders had an eager eye ever open for outlets for merchandise of all sorts. At New Amsterdam, the Dutch, when they saw the value set by the natives on their laboriously handmade wampum beads, contrived a lathe and a drill that shortly put the industry into mass production, to the great benefit of the traders. In 1656, also, John Pynchon recorded a list of his personal tools in the shop of the smith at Springfield, including "a tool for making Indian hatchets," that is, tomahawks. The English were ready to provide anything for which an Indian purchaser could be found: guns, powder, ball, tomahawks, arrowheads, shoes, shirts, or coats.

On the existing evidence it cannot be denied that they supplied completed metal arrowheads to the natives, for in no other way can be explained the discovery of two copper heads taken from the Fort Lot in Springfield, which are so symmetrical that they were unquestionably fashioned with adequate tools by an expert hand. Thus, there seemed to have been four sources from which the Indians might have secured their metal arrowheads—from native copper, from scrap metal, from new sheets of metal, and as complete points purchased from the English.

There the investigators paused in their search, and there the matter rested for a long time. As the years passed, these amateur archaeologists endeavored to encourage younger men to continue the search for light, and in this their efforts were quite successful. While

the groups of younger investigators carried on, however, the oldsters continued their interest.

In the summer of 1940, a combined party of the old and the young met at the Fort Lot in Hadley, by the south bank of Fort River (the Towunucksett of the Indians), the site of an Indian village

Gen. John Ashley House, Sheffield

of the seventeenth century. There, until the disposal of their domain to the English, in 1662, had lived the Sachem Wequogan, his wife Awonunsk, and their son Squompe, with their little band. Records indicate that both Wequogan and Squompe were possessed of outstanding intellect among the Valley natives, and both were often employed by the Pynchons in local affairs. There the recruits began their operations, while on the sidelines, despite crippled joints and dimming eyes, the boys of threescore years earlier did their part also.

Quite early in the day, Mrs. Frances C. Plough, wife of Professor Harold H. Plough of the Department of Biology at Amherst College,

turned up a metal arrowhead that plainly showed the marks of the scissors with which it was fashioned. Twenty feet away, an associate unearthed a fragment of a sheet metal kettle. Thus, by a perfectly natural coincidence, was provided a most satisfactory link in the chain of desired evidence. The remnant is a bit of the upper edge of the kettle, and has the holes where the rivets held a cast ear holding the handle or bail. To make the evidence complete, one rivet remained in the metal scrap. The length of this rivet shows conclusively that it held a cast metal ear, much thicker than the metal of the kettle itself. Its bent condition indicates that the ear was wrenched from the kettle by main force. Apparently someone had used the metal of the kettle for the making of some gadget, all except this remnant, which was so perforated with rivet holes as to be wholly useless.

Only by an analysis of the two bits of metal can it be determined whether they are identical in substance. If so, the conclusion that the kettle was used for making arrowheads seems inescapable.

In recent years, deer hunting in Westchester County, New York, has been permitted, but with bows and arrows only. Facts brought out by archers taking part in the annual pursuit provides data of worth in considering the comparative value of the weapons of the natives with modern high-powered equipment.

During the season of 1945, when it was estimated that the number of deer was greater than in pioneer days, there was a reported kill of fourteen deer and an unofficial kill of thirty. One of the successful hunters was Edward J. McCarthy, Sr., of Springfield, New Jersey, who related,—

"The season opened on the 15th of November and our party of four started out early in the morning and headed for Westchester. The following morning we entered the woods. Doc Vreeland and I were going to stand along the edge of a swamp and Strahman and Davitta were going to drive a ridge toward us. On our way into the swamp, Doc and I did a little still-hunting as the wind was right and the country seemed ideal for that type of hunting. I had cautiously surmounted a knoll which overlooked the swamp when a slight movement on the far side caught my eye. Keeping very quiet, I watched until I knew it was a deer approaching. The animal came along slowly, stopping now and then to feed, raise its head to look around—but it did not seem alarmed and continued until I could see it was a beautiful buck with a nice rack.

"On he came, until at a distance of about forty yards he stopped, looked up and then turned, presenting a perfect broadside opportunity.

"It was now or never, I knew, and I slowly raised my bow and shot. I was fortunate to place that arrow in the spot we all dream about, low down and close to the shoulder. That buck gave a leap and started over the edge of the swamp and up a small hill, then over the top and out of sight.

"I had visions of a long chase. Doc and I smoked a bit and then took up the trail. I circled the knoll over which the deer had dis-

appeared while Doc followed the trail. He had just about reached the top of the knoll when I heard that welcome shout, 'Here he is, Mac!'

"That buck must have dropped dead as soon as he had crossed the knoll, and no wonder, for we found the arrow, completely broken off, had penetrated the heart. I have seen buck shot through the heart with a high-power rifle travel more than 200 yards before dropping.

"Although I have killed many woodchucks with arrows, I had never before had the chance at big game, so I, too, had been a little skeptical about a quick kill. But after this experience I know that one shot will do the trick if it is in the right place.

"The specifications of my outfit is as follows,—

"Bow length: 4 feet, 10 inches.

"Bow wood: Osage orange, with from 1/16 to 1/8 of sapwood left on the back of bow. Drawing weight of bow at 26 inches is 53 pounds. Bowstring No. 12 linen, 38 strands. Arrow weight 460 grains. Arrow length, 26 inches from back of "tip", to end of.

"Plus the 2½ inch head or "tip", 28½ inches. The "tips" are known as broadheads. Four bladed broadheads are an innovation, in use about a year.

"I cannot see how the Indians got any penetration with their comparatively blunt arrowheads. We modern bow-hunters know that we must have our broadheads razor sharp, as the arrow has very little shocking power. We depend upon the quick bleeding which a sharp head will create and any hit by such an arrow placed anywhere in the chest cavity will bring down any animal very quickly. Large moose and elk are despatched every season recently by such methods and doctors have examined and reported on some of the incidents and they all seem to agree that the modern hunting boy with properly sharpened heads is just as effective as a rifle and more so on a poor hit, because the more an animal moves the greater amount of tissue is cut, which causes the animal to bleed out quickly and completely which of course, means the end of the hunt with no wounded animal to suffer.

"I have seen the modern bow used on woodchuck and with a dull steel head, the arrow would bounce off of a chuck's back. The same bow with sharp broadheads would give complete penetration, in fact, if the chuck were sitting up on top of a mound by his burrow, the arrows would go on through like butter, feathers and all. Usually, of course, one is shooting down at a woodchuck and quite often the animal is pinned down by the arrow, in which case he breaks the arrow just like matchwood. I have found that for chucks, a hickory shaft is best as they will not snap so easily as Port Orford Cedar or fir. Birch is good but second to hickory, I think.

"For deer I like the lighter, faster arrows and as you cannot hold a deer with any shaft the cedar or fir is much more desirable, being straight grained and makes a true flying arrow if the hunter does his part right."

The following announcement appeared in the newspapers of Western Massachusetts on May 13, 1837:

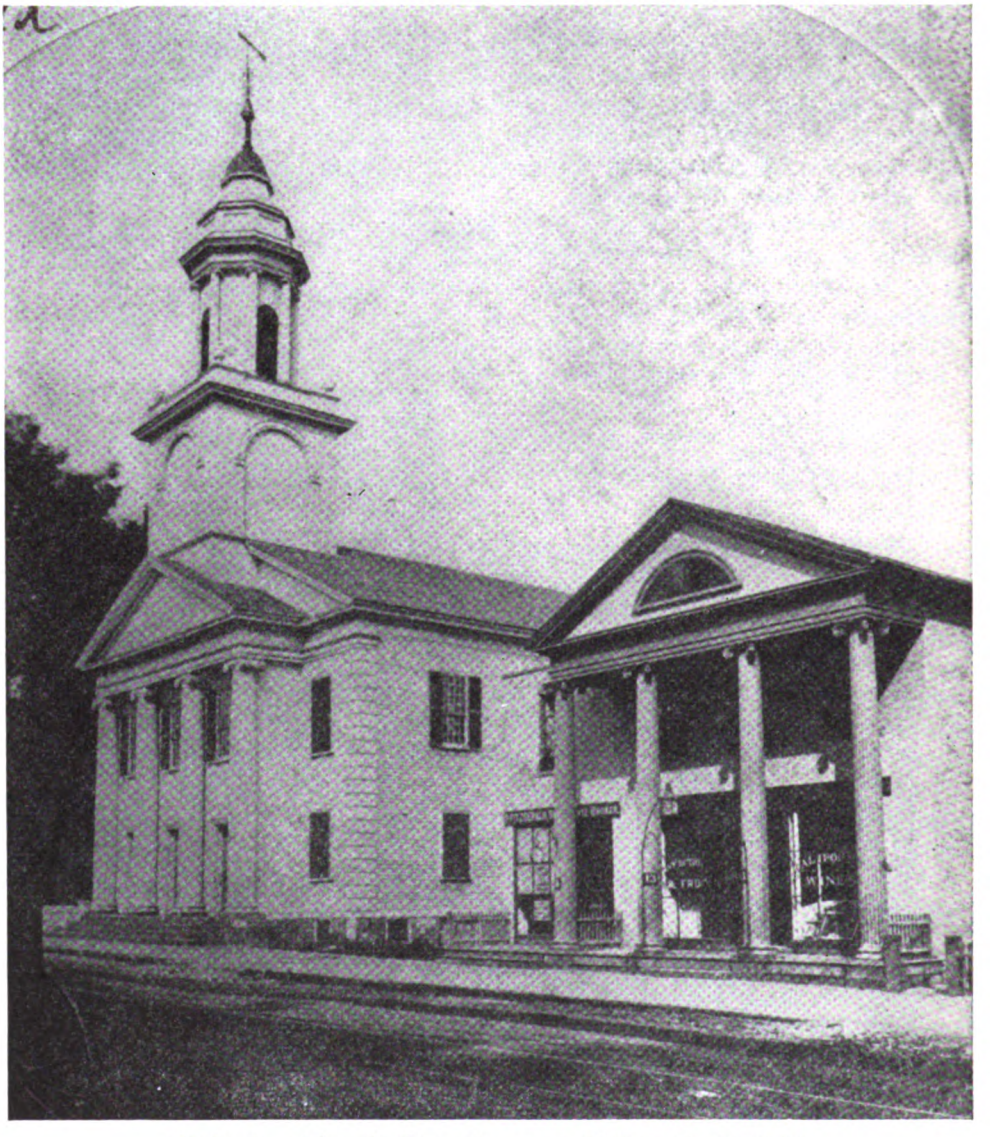
To The Public

The banks of Boston, New York, Philadelphia and Baltimore have been compelled to suspend specie payments. The necessary consequence is that banks in the country must follow their example. Although we regret the necessity which compels our banks to take this step we most heartily approve. Our banks are perfectly sound and good beyond all question.

The undersigned citizens of Springfield recommend to their fellow citizens to preserve their confidence in these institutions. Let there be no distrust and a short time will restore everything to a state of prosperity.

Moses Bliss
H. L. Bunker
R. T. Safford
Philip Wilcox
Hatfield & Gorham
Draper & Bailey
Smith & Orne
Philo F. Wilcox
More & Sanderson
Edmund Rowland, Jr.
R. D. Morris
Theodore Bliss
Horatio Sargeant
Noyes & Sargeant
Daniel P. Kingsley
Henry Brewer
Wells Southworth
William Bliss
Solymon Merrick
J. A. Nelson
Jeremy Warriner
Charles A. Mann
William Barton
A. G. Tannatt
F. M. Carew
Edwin Seeger
William H. Bowdoin
Lucius Allin
S. Rogers
Elisha Gunn
Levi J. Holt
Samuel H. Stebbins
E. D. Stocking
George Kilbon
Asabel Hubbard
Jonathan Bangs
Henry Collins
Samuel S. Woodworth
Joseph Ingraham
Charles J. Upham
Stephen O. Russell
Benjamin A. Bullard
Joseph Hannis
C. B. Chappell
Henry Fuller
Edwin Booth
Sterns & Parsons
Howard & Lathrop
George Ashmun
Samuel Bowles
Elijah Blake
Sol Warriner
Bryant & Bliss
H. & J. Brewer
Jonathan Dwight, Jr.
Raynolds & Morris
D. & J. Ames
Albert Morgan
Joel Kendall
James Brewer
William Child
Elisha Edwards
James W. Hale
Ames & Dwight
William H. Foster
Charles Stearns
G. & C. Merriam
William Dwight

1840—In May, 1840, the boiler of the steamboat *Greenfield* exploded at South Hadley, with the loss of three lives and $10,000 in property destroyed.



Unitarian Church, State Street at Willow, Springfield

On right is Springfield Bank, present site of Springfield Safe Deposit and Trust Company.

That same year S. S. Green was appointed superintendent of schools at Springfield, being the first school superintendent in Massachusetts.

1841—In 1841 the Western Railroad Bridge across the Connecticut River was completed, providing an approach to the Berkshires.

1842—In 1842 the first major attempt to drain the marsh between Main and Dwight streets in Springfield was undertaken when a sewer was laid through Elm Street to the river to reclaim the swamp land.

1848—On February 23, 1848, during a session of Congress in Washington, former President John Quincy Adams died in his seat in the House of Representatives. In due course, associate members of Congress were chosen to accompany the body on its long journey back to his home in Quincy, Massachusetts.

The cortège arrived in Springfield in the afternoon of March 9, 1848. Business was suspended, buildings were draped, bells were tolled and minute guns were fired as the procession marched down Main Street to the First Church where the body was to rest until the journey to Boston was continued by the morning train of the following day. That was before the days of morticians and funeral parlors, and the broad aisle of the church was deemed a most fitting depository for the sealed casket. David Smith, the carriage-maker, contrived a bier for use at the church as well as a catafalque for transporting the cumbersome lead-lined casket between the church and the railroad station.

Military companies of the surrounding towns joined with those of Springfield, and under the command of Col. Roswell Shurtleff, preceded the Congressional and Legislative committees, members of the bar and the clergy, fire department, armorers and others.

The Springfield *Republican* of March tenth, had the following to say:

"The remains of John Quincy Adams, accompanied by the committee of Congress and the committee of the Massachusetts Legislature, arrived in this town by the regular southern train at 3 o'clock yesterday afternoon. During the passage of the cars through the cities of New Haven and Hartford, the bells were tolled and other demonstrations of respect shown to the memory of the illustrious departed."

1849—From the earliest days and for approximately two centuries thereafter, Springfield's dead were interred in the ancient "burying place" by the riverside in Springfield, west of the church and adjacent to Elm Street. No stones marked the earlier graves for no lasting stone was then to be had in the community. In the following century it was found feasible to bring from Middletown, Connecticut, a hard brownstone suitable for grave markers, but locally the seventeenth century knew them not. There remains today, a stone that marked the grave of Mary Holyoke who died in 1657, but the workmanship suggests that the stone was actually of much later date. The elaborate brownstone monument that marked the Pynchon lot is known to be but a scant hundred years old, the monument itself being so dated.

There the bodies rested until the coming of the railroad. In 1849, to make room for the tracks, the remnants of 2,404 bodies and five

hundred seventeen markers were removed to the Springfield Cemetery which has been opened in 1841. Dr. Joseph C. Pynchon who then had charge of the removal of the Pynchon bodies, said thirty-six years later:

"Beneath the Mary Holyoke stone, dated 1657, deep in the white sand, six feet below the surface, were found the remains of two, lying side by side, with no others in close proximity. Is it too much to conjecture that these were the remains of Elizur and Mary Holyoke? The sand was discolored and some few pieces of the skulls and other bones were found while even the nails of the coffins were wholly destroyed, their places being marked by the rust only, while no other vestige of the coffins remained. The few remains gathered, soon crumbled to dust on exposure to the air, and with the surrounding earth, were deposited in the new cemetery."

Dust had returned to dust.

Such a condition suggests that the bodies were not then buried clothed, as today, otherwise some evidence might have remained. Pilfered shoe buckles and buttons are frequently found in Indian graves fully as old as those, though it is of course true that the place of interment chosen by the natives would have been in a soil having far greater preservative qualities than the damp soil by the river bank. Clothing was then far too valuable to have been disposed of in such a way. Contemporary inventories include odds and ends of wearing apparel that one would think fit only for a rummage sale. Rural New England people can recall the times when a man would be deposited in his coffin, lacking shoes and trousers. It was just a bit of New England "nearness". The absolute lack of identifying articles in the graves of the old cemetery indicates that the bodies were laid to rest, wrapped in a winding sheet or shroud.

1857—On April 5, 1857, there died at Springfield, John S. Edwards, aged ninety-three, the last surviving local soldier of the armies of the Revolutionary War. He was born at Dedham, July 11, 1764 and in 1775 removed to Norwich, a hamlet of Huntington, Hampshire County. There, at the age of seventeen, he was drafted to serve six months in the army and was stationed at Fort Schuyler and Fort Stanwix, where hostile Indians menaced the frontier settlements. Following his discharge, he returned to Norwich and continued there until 1798, when he removed to Springfield, where he applied for a pension in 1833 and where he was long employed as a gardener. He was often a feature of the Fourth of July processions, riding in a carriage and returning the salutations of the bystanders.

In 1852, when he was eighty-eight, he was a privileged guest at a small impromptu reception for Louis Kossuth, the Hungarian exile. A paragraph from a journal kept by one of the visitor's suite read,—

"April 23, 1852.—On retiring to his room at the Massasoit House, several individuals were introduced and among them was a venerable Revolutionary soldier, Mr. Edwards".

His funeral was a colorful display. For the occasion the militia companies of the city combined with a military band to form a battalion under command of Col. Horace C. Lee. The City Guards wore blue frock-coats, light trousers and towering bearskin hats. The Horse Guards wore red coats, white trousers and chapeau like those of the Knights Templar, carrying a black or white plume. They carried sabres and had pistol holsters on each side of the saddle.

The funeral was held from the Universalist Church, then at Main and Stockbridge streets and, after services by the Rev. J. J. Twiss, the body of the old soldier was escorted to the grave where a parting salute was fired.

1855—On a broiling July day in 1855, there appeared in Springfield, a goodly portion of the undergraduates of Harvard, accompanied by the more sportive of the faculty and alumni. Here they were met by a similar group from Yale, the occasion being the second of the regattas between the two Universities that have become a classic.

Three years before, the first of these contests between them had been rowed over a two mile course on Lake Winnepesaukee, Yale winning by about two lengths. There the course had been so far-off shore that it had been difficult for the spectators to distinguish between the two crews. With that experience in mind, on arrival in Springfield, the Harvard contingent sent an emissary to a local store for the purchasing of ribbons to tie on the arms of the crew. Perhaps because it was the more readily available, or because it happened to please the eye of the buyer, crimson was chosen. When the Yale crew arrived, they followed suit, choosing blue. Ever since it has been crimson for Harvard and blue for Yale. The custom was soon taken up by other colleges and schools until the use of distinguishing colors became universal. Thus was initiated the present-day pageantry, traditions, color and crowds.

The sport was then called "boating" and prior to 1852 racing was but incidental to rowing, most of which was done for the mere joy of it. It was before the days of shells and heavy navy gigs were used, similar to the captain's gig of a man of war. Their use was in no way confined to the colleges, many crews being on the waters, known from the name of their craft, as "Harvard", "Huron", etc.

At this second meeting at Springfield in 1855 there were two races, Harvard winning both. The crimson's "Iris" an eight-oared lap-streak boat with coxswain, beat the Eli's "Nereid", a six-oared craft, with coxswain, twenty minutes to twenty-two. And the Harvard Y.Y., a four-oar craft with no rudder, defeated the blue six-oared boat, with coxswain twenty-two minutes and forty-seven seconds, to twenty-five minutes.

The next nine meetings of the rivals took place at Worcester and then the regatta returned to Springfield for the 1872 and 1873 races. After a gap of two years, during which the crews rowed at Saratoga, Springfield played host again in 1876 and 1877. The regatta switched to New London in 1878 and since then has continued there almost completely.

While at Springfield, the headquarters of the Yale crew was in the old Eagle tavern which stood on Elm Street, in West Springfield, approximately where the West Springfield Trust Company now is.

1862—In 1817 Heman S. Lucas was born in Blandford, Massachusetts and at the age of eleven removed with his father to Canaan, New York. He received his early education at Wilbraham Academy; studied medicine with Dr. John Merriman in Canaan; and in 1843-4 practiced dentistry in South Lee, later removing to Chester where he practiced as a fully qualified physician. There he evolved a method of producing gelatinous silica from the decomposition of serpentine rock for which he obtained a patent. By the same process he also produced the commercial article known as epsom salts or sulphate of magnesia. These became the nucleus from which in 1852 came a corporation known as the Serpentine Paint & Fire-Brick Company. This title was later changed to the Hampden Paint and Chemical Company and the plant removed to Springfield where it still operates on its original site on Armory Street. From a deposit at Chester, the company very early made a paint known as Hampden Green which supplanted paint made from Paris green, which, from its poisonous nature, was fast falling into disrepute. From the same green deposit was also made the ink with which the first "greenbacks" were printed.

During the Civil War the immense expenditures of the government led to the issue of an unprecedented number of banknotes, bonds and currency of various kinds. From the color of the ink used in printing the reverse side of some of these, they came to be known as "greenbacks". The manufacture of these notes in such quantities taxed the resources of the government and there was reason to suspect that forged notes and bonds were abundantly in circulation.

Prior to this time, all the engraving work of the national government had been done under contract by commercial houses, but eventually a plant for this work was established in a section of the Treasury Building, which was known as the Bureau of Engraving and Printing. Here every detail was undertaken; rags and fibers were taken in; ink was manufactured; steel plates were engraved and hardened; and finished notes were sent out. Green ink was produced from the "Hampden Green" from Chester. Distinctive paper was made in the building under contract with a practical papermaker. Only on very rare occasions were visitors admitted. The research and the experimental work were all carried on under one roof and the operations were most secretive; much in the nature of the studies which preceded the development of the atom bomb in World War II. Night and day, armed guards protected the premises from the curious and the prying. On August 28, 1862, the new Bureau went into operation, with one male and four female operatives, in addition to the officer in charge. By the end of the war the personnel had grown to five hundred twenty-seven. The distinctive paper continued to be made under this arrangement until 1869, since which

time it has been made under contract, much of it to the great advantage of Berkshire County.

In 1856 Dr. Lucas discovered at Chester what was supposed to be a vast deposit of high-grade iron ore. During the year twelve-hundred tons of the mineral were taken out and processed at furnaces in Lenox, Stockbridge and Hudson. The financial crisis of 1857 compelled the discontinuance of operations, but in 1863 a blast furnace was erected in Chester and the manufacture of iron undertaken, but the quality of the product was inferior and the project was abandoned.

In the meantime, Dr. Lucas found that the ore contained a high percentage of emery, this being the first discovery of that mineral in the United States, which was of double importance at the time as the country was then at war. Heretofore, the emery used in this country has been imported from the Turkish dominions, and as the English and French governments had a monopoly of the mines near Smyrna in Asia Minor and on the Greek island of Naxos, the United States government was debarred from procuring its necessary supply except under unusual difficulties. In this dilemma the Chester emery was utilized and the government works were supplied with it for a considerable time.

In 1868 the Hampden Emery Company was formed and a mill was erected on the river below Chester Village for processing the product.

The discovery of emery at Chester created great interest in the United States and many explorations were made in various parts of the country, resulting in the discovery of the mineral in several localities, and in the spring of 1875 Dr. Lucas discovered in North Carolina supposedly inexhaustible deposits, of a quality superior to those of either Massachusetts or Turkey, and thereafter the Chester supply became of lesser and lesser value.

1864—From the first days of the settlement at Springfield, the town street followed the westerly bank of the marsh and so low was the level of the roadway that in times of heavy rains the street was half in and half out of the morass. From time to time, dirt and waste materials were dumped in to raise the grade, but nothing methodical was attempted until near the close of the Civil War. In 1864 Mayor Henry Alexander said that "by constant filling in of Main street with sand and gravel over a series of years, it had been raised about six feet above the natural level, thus blocking access to the lower floors of a number of expensive brick and stone buildings along the street".

A committee had been appointed the previous year to consider the situation and that group, in anticipation of the adoption of their recommendations, exceeded their authority to the extent of buying a ledge of trap-rock located adjacent to the Western Railroad in Westfield as well as a machine for breaking up the rock.

Mayor Alexander concluded his report with the prophesy,—"I feel sure that Main street and other streets once covered with this rock, will fully justify the expenditure".

Thus Springfield accepted the method of road surfacing designed by the Scotch engineer John L. McAdam and these were the first macadamized roads in Western Massachusetts.

1868—A Sign of the Times

TO THE PUBLIC!

Two years ago the experiment of closing the Stores two evenings in the week was tried and proved to be successful in every respect, and now has become an established custom.

We hope you have experienced no inconvenience from it, while the clerks for whom it was done, have been greatly benefited. Early this Spring a movement was made to close three evenings, believing it would meet your approval, and bring our working hours nearer to a level with those of the laboring class, who finish their work at six.

It was approved and adopted by all Merchants to whom it was presented, with one exception—that of McKnight, Norton & Hawley, who refused to close their Store, and declared their intention to break up the custom of closing even two evenings. The principal reason they gave, (which cannot be considered in any other light than that of the promptings of pure selfishness,) was this: "WE BEING THE LARGEST DRY GOODS HOUSE IN THE CITY, RULE THE TRADE, AND IF WE KEEP OPEN ALL OTHERS WILL FOLLOW." (?) The FALSITY of this statement is shown by the fact that ALL other Dry Goods Houses close THREE evenings paying no regard to the GREAT MOGULS.

And now we, as an Association composed of clerks of all trades, appeal to you to assist and sustain us. A great deal depends upon you whether we have our evenings or not; for, by withholding your patronage on those evenings, it will not be for the interest of any Merchant to keep open, and no one would do so unless it was from pure obstinacy.

Having now the facts before you as they are, we only ask that you WILL NOT trade on WEDNESDAY, THURSDAY AND FRIDAY EVENINGS, and will do ALL in your power to discourage it in those of your friends whom this Circular fails to reach.

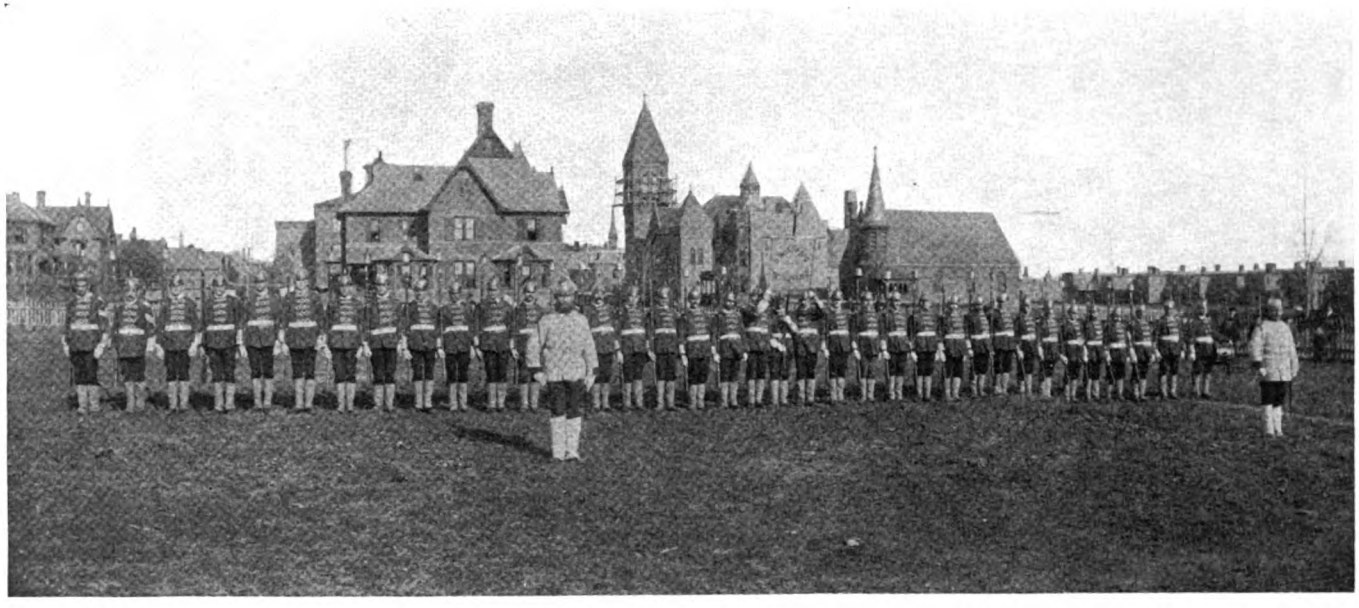
Respectfully

Early Closing Association.

Springfield, Mass., April 20, 1868.

1873—Holyoke became a city in 1873.

1874—The present County Court House on Elm Street, in Springfield was completed in 1874, just three-quarters of a century ago. During preliminary consideration of the details of its construction, a drawing of the proposed façade was submitted, on



(Photo courtesy The Holyoke Public Library)

Holyoke — Whiting Guards Lined up on Library Building Lot About 1884

which appeared above the doorway, the Latin equivalent of the English word "justice".

To this suggestion, prompt objection was made by an elderly judge, wise and experienced in the ways of man; a kindly soul who had long been appalled by the avariciousness of the human race and who contended that law and justice were not necessarily synonymous.

The understanding Solomon was Judge Reuben A. Chapman and that is why, today one finds the single word "LEX" graven over the entrance to the building.

1875—During King Philip's War, on October 5, 1675, the Indians destroyed by fire, the church parsonage which stood near the present Main and Vernon streets in Springfield. Two years later, a new parsonage was built on the same site, which stood there until 1864, when, to make room for the prospective Fallon Block (the shell of which is still standing), it was moved diagonally across Main Street to the south side of Hillman Street, between Main and Dwight streets. A local item in the *Republican* of September 1, 1864, told of the finding of a pistareen coin, disgorged from a crevice in the building, owing to the twisting and racking incident to the moving of the building to the chosen location.

Hillman Street was then little more than an almost impassable cart track across the swamp lying between Main and Dwight streets and continued much in that state for more than ten years longer. On May 22, 1875, the Springfield *Commercial Advertiser* reported on a situation relating to a new building planned for the Third National Bank as follows: "The excavations for the new building at the corner of Main and Hillman streets are nearly finished. The dirt removed has been made good use of in grading Hillman Street in that vicinity; it would also be a good plan to fill up the old frog pond opposite to the Springfield Laundry".

To complete the record, it should be noted that the old parsonage remained in the new location until May, 1890, when it was demolished to make way for a new brick block.

1876—In 1876, the Haynes Hotel on the north corner of Pynchon and Main streets in Springfield, installed the first hydraulic elevator used in the city, with a double car to accommodate passengers and baggage separately. The *Republican* of May 12, 1876, announced that,—"the passenger elevator at the Haynes house has now been in successful operation for a month or more and is exciting considerable interest among men of a practical turn of mind. It differs in very essential particulars from any other elevator now in use, the general principle being that the car rides on top of a hollow shaft which is sunk seventy-five feet into the earth. The weight of the car descending forces water out of the cylinder, and the fact that the city has two systems of water supply, with different pressures, makes it possible for this to be done without any waste of water, which is taken from the Ludlow mains and transferred to the low pressure pipes".

Those "men of a practical turn of mind" continued their interest in elevators and on September 22, 1876, the Springfield *Republican* reported that "the new elevator at Kibbe's hotel block, near the depot, necessitated a shaft sixty-five feet deep and at the depth of forty-five feet, cobble-stones were found, worn with water, in what, in some pre-Adamic age, was apparently the bed of the Connecticut River.

Thus did the modern passenger elevator make its initial bow in Western Massachusetts.

In 1897 it was announced that the Elektron Manufacturing Company, located on Wilbraham Avenue in Springfield, was making "a type of elevator known as the full automatic push-bottom control which had attained large popularity". With this elevator no operator was required, as the passenger "merely pressed the button corresponding with the floor to which he desired to go, the elevator proceeding to that floor and stopping automatically." The outfit was said to be "absolutely safe and so simple that children of five years of age readily operated it".

This was the earliest known automatic elevator, so common in apartment buildings today. Eventually the Elektron business was absorbed by the internationally known Otis Elevator Company.

1879—From the printed pages of the past, the harried housewife of the present reads of the halcyon days when her grandmother dictated the price of household necessities. This was especially true of foodstuffs which sold at a price so low as to seem fantastic to the present generation.

On New Year's Eve in 1879, the good people of Agawam celebrated the birth of the new year with a gathering at the Town Hall to which the public was invited. A hot turkey supper was served from five to seven, followed by two hours of music and tableaux, when the serving of supper was resumed from ten to twelve. The price of each meal was the lavish sum of twenty-five cents.

Fifteen years later, advertisements in the Northampton *Herald* offered flour at three dollars and twenty-five cents a barrel, lard, eight cents a pound and lemons, ten cents a dozen. Women's shoes were one dollar and seventy-five cents and kid gloves seventy-nine cents. Various restaurants listed full dinners at twenty-five and thirty-five cents each.

In 1896 eggs were offered at two dozen for twenty-five cents, roast beef was ten cents a pound and butter sixteen cents. Men's all-wool suits were twelve dollars and women's shoes one dollar and thirty-seven cents.

In 1897 Barr's restaurant, the most popular dining place in Springfield, offered a beef or turkey full-course dinner for fifty cents.

In 1898 sugar-cured bacon or skinned-back hams were ten cents a pound. Native beets were three cents a bunch and turnips four cents. Best shoes were two dollars and fifty cents and eye glasses fifty cents. Men's cheviot working shirts sold for twenty-five cents and ladies' tailor-made suits for five dollars to nine dollars.

In 1906 the Cafe Kostenbader in Holyoke advertised a "delicious roast turkey dinner with all the fixings and a dessert that can't be beat in the city" for 40 cents, every Sunday.

In spite of this "low cost of living", laboring men grew restive and uneasy and in January, 1907, "the journeymen carpenters of Holyoke passed resolutions favoring a spring campaign for higher wages. A minimum of $3.00 per day was suggested".

In 1909 a housewife actually paid one dollar and thirty-five cents for the following eatables:

Seven-and-three-quarters-pound rib roast
One pound sausage,
Six lamb chops,
One pound suet.

Little wonder that the era is referred to as "the good old days".

War inevitably creates a shortage of both man-power and food and nature followed its usual course when hostilities with Spain opened in 1898. The price of flour very promptly advanced to such exorbitant heights that the bakers of Western Massachusetts joined their fellows of other areas in raising the price of the five cent loaf of bread to six cents. That was but a penny, yet it was a twenty percent increase. The raise called public attention to the situation and as the price continued to advance, many families were reported as buying a quantity of flour for hoarding.

With the close of the war and the return of the troops to beat their arms into plowshares, there was a gradual tendency back to normalcy, but the ebb never receded to the point of beginning. The same cause and effect operated in World Wars I and II; each time starting from a higher base. This is where it all began; thus the vicious circle continues.

1881—The years from 1881 to 1909 might well be called the bicycle era, though the first decade of the period was that of the "high" wheel, when the rider was, perforce, a brave and hardy person. When the tire of the front wheel met with even a small obstruction, the rear wheel was lifted from the ground, causing the rider to be thrown to the ground, face down. At the same time the thighs were cruelly forced against the handle bars, resulting in excruciating pain. Why skulls were not fractured and leg bones broken is a mystery.

The Springfield Bicycle Club was organized in 1881 with nine members, who then comprised all the bicycle riders in the city. In December of the following year, the entire second-floor of the Massachusetts Mutual building was leased for club rooms and by 1884 the membership exceeded one hundred.

In January, 1889, the newly organized Warwick Cycle Manufacturing Company of Springfield, brought out an improved high wheel, but the transition from the high wheel to the "safety" was then in an active stage, forcing the company to discard its pro-

posed model and adopt the new type of low wheel which was the order of the day.

Even with the more convenient low wheel there could have been little pleasure in riding on the rutted, dusty, dirt roads. To make more accessible the canoe rendezvous at Calla Shasta, Pleasure Grove, Gallup's Grove (now Riverside) and other recreational spots in Agawam, an organization made up of members of the League of American Wheelmen and known as the Cycle Path League, built a cinder path paralleling the river and the highway south from the South End Bridge. This continued in use for some time and in 1898 the Springfield *Union* noted that the "directors of the Cycle Path League decided to put the Agawam path, below the South End Bridge into good shape for the bicycling public".

In 1892, the League Cycle Club (later known as the Massasoit Cycle Club) was organized and thoughts of the members centered on their neglected opportunities for communing with the great outdoors. At Pleasure Grove, on the River Road in Agawam, a bit north of Calla Shasta was a dilapidated old picnic structure which the bicyclers acquired in 1901. After thorough repair and renovation a very attractive meeting place resulted, which was known as "Massasoit Wigwam." The advent of the modern bicycle made it possible for women to join in its pleasures, as what had been a mere sporting adjunct became a social vehicle. Soon after, a bicycle was designed having a special frame to accommodate women's skirts and the whole character of the bicycle business assumed great promise. At Springfield the Warwick Cycle Company made the *Perfection.* At Chicopee Falls, the great Overman plant produced the *Victor.* The *Columbia* was made by Pope at Hartford and from Hartford came also the *Hartford* of the Hartford Cycle Company. The *Crescent, New Mail, Monarch* and the *Rambler* were of Chicago. From South Framington came the *Hickory,* the frame of which was entirely of hardwood. In 1889 the American Bicycle Company was organized, combining forty-eight of the larger concerns. Standard models, fully equipped, sold for one hundred twenty-five dollars, although less desirable ones could be had for as little as forty dollars. It looked like an endless boom.

All over the country, blacksmiths and small machine shops bought pedals, wheels and other parts which were assembled into vehicles representing the personal whims of the individuals as they day-dreamed of fortunes to be. One such shop was that of George M. Hendee in Springfield. As the bicycle faded out, Hendee developed one of the first motorcycles and the business developed into the present Indian Motorcycle Company.

Bicycle manufacturing was at its peak in 1896 and all looked rosy, but clouds shortly appeared on the horizon and in September, 1897, the great Overman Wheel Company of Chicopee closed its doors and made an assignment of all its property to Henry H. Bowman, president of the Springfield National Bank, as trustee for the benefit of its creditors.

(Photo courtesy The Holyoke Public Library)

Holyoke — St. Jerome's Guards, 1888

A new day was dawning, and this was the overlapping period when the bicycle and the automobile were contending for their very existence. As far back as 1879, a German named Benz had perfected the gasoline automobile engine. As in the prosperous days of the bicycle, countless mechanics designed automobiles, some quite clever and others fearful and wonderful. A few started out bravely to conquer the world, but most of them utterly failed. There was Henry Ford, of course: And R. E. Olds who gave his name to both the *Reo* and the *Oldsmobile*. Ask an old-timer for the names of a score of the cars of that day, now wholly forgotten and the result would be a list something like the following:

Baker Electric.
Columbia Electric.
Milburne Electric.
Owen Magnetic.
Stanley Steamer.
Atlas.
Bay State.
Dort.
Jewett.
Jordan.
Kenworthy.
Locomobile.
Maxwell.
Mitchell.
Moon.
Peerless.
Scripps-Booth.
Stoddard Dayton.
Grant.
Haynes.

It is said that such a list could be expanded to include a total of over three hundred names.

Catchwords and slogans were common. One make, still on the market, iterated and repeated to its prospective customers the promise that they could expect to find "every mile a pleasant memory", while a Springfield hotel, by a transference of a single letter, made it read "every meal a pleasant memory" and have so perpetuated it.

The majority of one-seated cars were then known as runabouts, but the Morse-Readio Company of Springfield, advertised their promising young hopeful as a "whizabout".

At one time Springfield had four automobile manufacturing plants in addition to the Stevens-Duryea at Chicopee Falls. The *Sultan* was a heavy pleasure car. The *Atlas* was a taxi-cab. The Morse-Readio Company made light pleasure cars. In 1905 the Knox Automobile Company was said to be the largest manufacturer of gasoline commercial vehicles in the United States. The *Stevens-Duryea* was first demonstrated on the streets of Springfield but it was another ten years before it was advertised as being ready for delivery.

Once more, history repeated itself and as was the bicycle, so was the automobile handicapped by lack of feminine interest. Early automobiles were started with a hand crank. If all the ignition elements were at the maximum of efficiency, the motor could be put into operation without too great effort, though few women even attempted it. Occasionally some Amazon learned to tame the brute,

but such were far from being typical examples. Then too, if the spark was inadvertently advanced beyond the proper point, the motor was quite apt to back-fire and so spin the starting crank in the opposite direction, leaving the operator with a broken arm or a sprained wrist.

In 1911 Charles F. Kettering, the General Motors genius, invented the self-starter and a new day arrived. As a result, there are today 14,000,000 women drivers in the United States or thirty percent of the national total.

1881—From *The American Architect,* July 2, 1881

Springfield, Massachusetts, which was one of the first cities to adopt the Holly system of steam heating, is likely to surpass its rival towns also in the matter of electric lighting. A company of citizens has been formed for the purpose of supplying light not only to large buildings and for street illumination, but for dwelling-houses. Of course, the company will be obliged to use some of the patented lamps, and a committee has been designated to visit New York and investigate the merits of the different systems. It will certainly be advantageous to have the business, at least for a time, controlled by a single company, and we may hope for interesting results from the Springfield experiment. It is worth remarking that nearly all the patentees of electric apparatus seem to have been seized lately with a kind of apathy in regard to their business in this country. The United States Company, although it is manufacturing great numbers of the Maxim lamps, is indisposed to make contracts at present for placing them in buildings, and the latest improvements of Mr. Edison and Mr. Brush have been for some time matters of rumor only. The explanation probably is that all those interested are waiting for the great Electrical Exhibition, which takes place in Paris in August, and fear to lessen their success there by a premature display of their best work. It would be well worth the while of the Springfield committee to wait another month, and make their observations in Paris, rather than on this side of the ocean. The American electricians have arranged for a very brilliant representation there, and the facilities for comparison and study of all the varieties of apparatus will be such as cannot possibly be found elsewhere.

1883—Northampton was incorporated as a city in 1883.

1889—For six years, from 1889 to 1894 inclusive, the annual gridiron contests between Harvard and Yale were staged at Hampden Park in Springfield, attracting great crowds, with nation-wide publicity for the city. Special trains on all roads brought more than 20,000 people. Police were drafted from Boston and other New England cities to cope with the influx, the metropolitan officers supposedly having at least a speaking acquaintance with the great hordes of pickpockets and petty thieves who were expected to arrive with the more conventional visitors.

On these occasions, Western Massachusetts went collegiate for a brief period. It was still an era of self-made men, when a higher education was generally regarded as but a bit of fruitless affectation hardly worth giving up four years to. Few, except those planning to become clergymen, lawyers or doctors, were willing to sacrifice the necessary time demanded for college life. Hence, in the hinterland,

(Courtesy of Pioneer Valley Association)

Pelham Town Hall

there was a lack of knowledge of college ways and little first hand acquaintance with the cant and jargon or the competitive games of the period.

On the great day, the play-boys of the city aped the envied visitors in a vain attempt to hold their own in the eyes and hearts of the village belles. Much in favor were wide, floppy trousers, counterparts and very patent imitations of the "bags" of their English fellows. Derby hats were a "must". Some articles of attire featured by the visitors were entirely foreign to their hosts. From the left lapel of the overcoat hung a single, great, fluffy chrysanthemum bloom with a stem two or three feet long. On the week of the game these sold at one dollar each, and that in an age when a four-course dinner could be bought for fifty cents.

Lucky was the girl who had even a prep-school brother, willing to be sacrificed as a last resort escort to the varied festivities. A

young woman having a brother actually an undergraduate, arriving home with a room-mate, became an envied queen in her own right, with largess to share with her intimates.

Second only to the great game itself was the dance held each year on the "night before" in the ball-room of the City Hall, on Court Street. Out of deference to the dainty trailing skirts which swept the floor, heavy white-duck was stretched over the boards from wall to wall. For further defense against tragedy, skirts of ball-gowns were equipped with a loop of ribbon, one end of which was attached to the skirt at a point about half-way between the knee and the hip. With a quick movement, the dancing lady slipped the loop over her wrist and so lifted the train of the skirt safely out of danger from the feet of careless men.

The drab walls were really made quite attractive by draping them with pastel colored muslin of "nile green and shrimp pink" as described by a contemporary reporter. Waltzes of course predominated, though occasionally the music of a galop attracted an oldster and even the lancers were indulged in, albeit a trifle shamefacedly. Such affairs were of necessity most democratic for the proceeds were applied to the cost of stands, seats and the like, so that one and all were encouraged to pay the fare and attend.

The public sale of tickets to the game provided another long remembered occasion. Young men and others not so young, spent the night in a long queue, to be early applicants for choice of seats. Telegraph messengers and others, for an established fee, relieved their principals or brought coffee and doughnuts to them at stated intervals through the night. To the small lads who thus stayed up all night, it was quite similar to enjoying a second night-before-the-Fourth of July celebration.

1890—In 1890 Pittsfield became a city.

1891—In December, 1891, Dr. James A. Naismith, at Springfield College invented the game of basket ball. This is the only major sport played in the United States which is purely of American origin.

1895—In 1895 North Adams became a city.

1896—In 1896 considerable drubbing around with golf clubs was indulged in, over the hillside pastures of the Ethan Brooks farm in the Riverdale section of West Springfield, as a result of which a group of Springfield and Holyoke men, inspired by Thomas W. Hyde, son of Henry S. Hyde of Brush Hill, West Springfield, formed the Springfield Country Club the following year. An effort to include two hundred charter members proving overoptimistic, operations began with an initial membership of one hundred sixty-three and an unpretentious club-house was built on the verge of the plateau west of the Ethan Brooks home in an unique location. To the east and north were sweeping views of the Connecticut River with Chicopee and Holyoke in the distance. To the west were orchards and a cranberry bog stretching back to the Piper Road. Members arriving by bicycle or trolley left their wheels and extra wraps at an accommodating roadside home at the foot of the hill and climbed

the steep slope to the club house. Seated on the veranda there, one listened for the chug, chug of an occasional motor car endeavoring to negotiate the winding road to the club grounds and wagered his sestertia on the outcome of such rash attempts to defy the law of gravity.

A much beloved colored man named Henderson served as custodian and general factotum. The house itself, known as "The Lodge", comprised a reasonably roomy general room, beyond which were men's and women's locker rooms separated by a tiny kitchen, equipped with refrigerator and stove. Members brought box lunches which were supplemented with coffee, and such simple hot dishes as they prepared themselves or inveigled Henderson into helping with. Usually Henderson had a ham in his quarters, and he was ever willing to co-operate with those who brought in the mushrooms which grew so profusely on the golf course.

They were simple days but thoroughly delightful. Due to a meager income, only modest attempts were made to provide for the golf fan. A baseball diamond was first laid out; then came tennis courts, followed by a few units of a golf course, but it was a long time before a full nine-hole golf course was established.

In those early days, a visit to the club by trolley or bicycle was an all day affair and as the membership increased, the young matrons, who made up a goodly share of the total, demanded greater comforts and a new house was built in 1901, from plans by E. J. Parlett. At the same time, shelters were erected for the temporary protection of the horses of the members. The opening of this new house was a gala event, attended by a large number of the elect of the valley, and included a three-hour concert by the Second Regiment Band. This second house was entirely destroyed by fire, and the succeeding season life was carried on in a tent, while the present house was being built from plans by G. Wood Taylor. For the dedication of this house, the Second Regiment Band again provided music.

Though golf at that period had been long quiescent in Massachusetts, the records show that the game was not unknown in Colonial days. William Burnett, Governor of Massachusetts, died in office in 1729 and there is evidence to suggest that he was perhaps the first golfer in America. The probate inventory of his estate, on file in the Suffolk County court house in Boston, includes the following items, indicating that he played golf in the Colony:

"Nine gouff clubs and one iron club,	£2.00
Seven dossen balls,	4.04"

Among the books available in Boston in the late eighteenth century was "Pigott's New Hoyle, or the General Repository of Games, containing rules and instructions for playing Goff".

1897—What a Half-Dollar Would Buy at Springfield's Most Popular Dining Place

Barr's
Table d'Hote

FIFTY CENTS

Potage	*Chicken with Rice* *Puree of Split Pea* *Finger Rolls*
Poisson	*Oyster a la Poulette*
Removes	*Fillet de Bœuf a la Jardiniere* *Young Turkey,* *Cranberry Sauce*
Sorbet	*Punch a la Financiere*
Entree	*New Asparagus* *Sauce Bechamel* *Bœuf a la Mode*
Entremets	*Mashed Potato* *Green Peas* *String Beans*
Dessert	*Roly Poly Pudding* *Cocoanut Custard Pie* *Gelee au Marasquin et Creme* *Assorted Cakes* *Neapolitaine Ice Cream*
	Cafe

12 to 2.30 P. M.

Thursday, April 8th, 1897

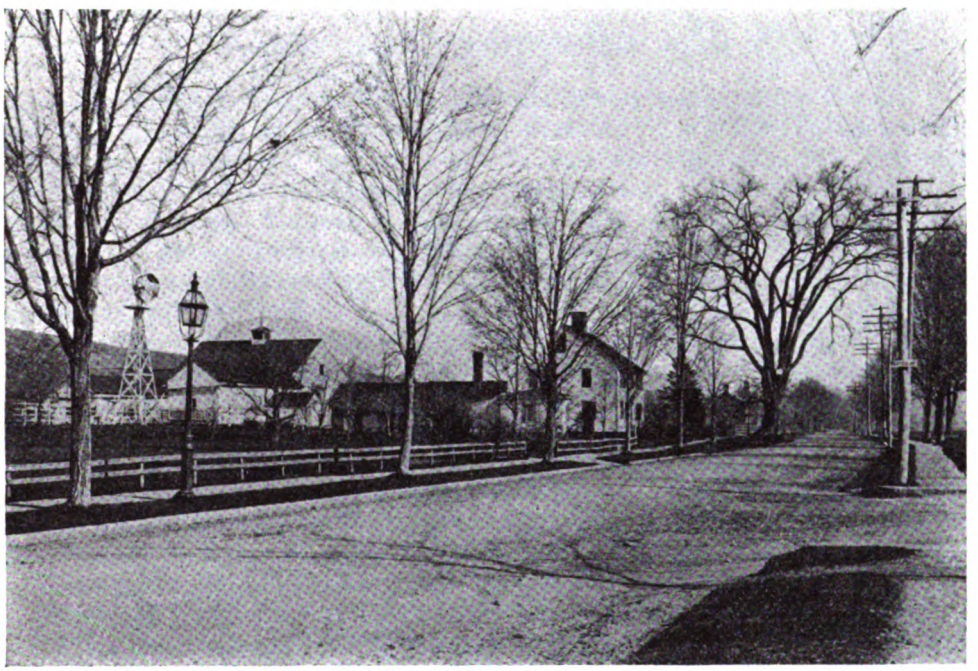
1898—In 1898 the Spaulding and Pepper Company of Chicopee Falls, manufacturers of bicycle tires, made a voluntary assignment for the benefit of its creditors and that same year the assignee conveyed the property to Noyes W. Fisk of Springfield, on behalf of his son, Harry G. Fisk, who created the Fisk Rubber Company, later absorbed into the United States Rubber Company.

For the 1898 season, the coal dealers of Western Massachusetts established a uniform price of $6.25 for anthracite coal.

Northampton provided the major sensation of the year when Lewis Warner, president of the Hampshire County National Bank and treasurer of the Hampshire Savings Bank left the city before Federal officials arrived to arrest him as an embezzler from the banks to an amount then estimated as between $100,000 and $200,000.

1910—In the early days of the present century, Western Massachusetts suffered an economic loss from a cause that was so readily main sources of the farmer's income was lost to him forever.

Sixty years ago the American sweet chestnut tree provided one of the most valuable crops in southern New England, making up about sixty percent of all forest species. The wood was especially valuable wherever it was so used that it was subjected to moisture, preventable that it amounted to a major tragedy and one of the hence it was particularly adapted for use as railroad ties, telephone



(Photo courtesy The Holyoke Public Library)

Holyoke — Fairfield Homestead, Northampton Street, Between 1885 and 1890

Probably the oldest house in Holyoke. Lucius Morgan married in 1768 and took his bride to this house. His daughter married a Fairfield.

poles and fence posts and many a Western Massachusetts farmer derived his entire cash income from the supplying of chestnut ties and poles.

In 1900 a blight was found to be destroying the chestnuts in the Bronx, New York, which proved to be an intrusion from Asia. Nothing overcame the scourge and efforts toward retarding its spread were fruitless.

By 1910 it had spread to about half the chestnut growing area of the country which in the East extended from Maine to Alabama. In another ten years it had completely destroyed the species in many areas, including Western Massachusetts.

Varied and continuous efforts have been made to bring the chestnut back. Shoots coming up from old roots are carefully nurtured until they perhaps produce nuts but eventually the entire tree

is killed by that same blight which eliminated its forebears. No experiment whatever has been entirely successful. Certain Oriental varieties have shown themselves to be blight-resistant and grow readily in this country but the task of replacing the millions of the lost American variety is an utterly impossible task.

1914—In 1914 Westfield was incorporated as a city but the act was rejected by the town.

1875—Armory Hill in Springfield

In early days the territory on the hill east of Springfield was known as "The Plain." Over the centuries prior to the coming of the English, the annual burnings of the Indians had destroyed every vestige of vegetable growth except on ground too wet for fire to run over. Eventually, even the humus was consumed, leaving an utter waste, which, after the expulsion of the natives in 1675, nature struggled to amend. Washington passed over the tract in journeying from Springfield to Boston in 1789 and said that "for the first eight miles I rode over an almost uninhabited pine plain, much mixed with sand." On the town map of 1795, the territory is designated as "pine barrens, interspersed with unimprovable swamps." These swamps were the glacial kettle holes, still so much in evidence. Then, and until recent years, many of these provided the cranberries so highly valued by the Indians. The pines seen by Washington were of the same sort as the scrub pines growing there today; probably little larger now than then, there being so little soil for root growth.

In the early nineteenth century, that part of The Plain extending from State Street, northerly to and perhaps beyond Bay Street, and from Catharine Street to Thompson Street, was known as Hayti. It was diversified by yellow pine trees and negro cabins, not least in importance of which was that one of "old Samanth", the wife of Reuben Sands, a powerful negress whom two constables were needed to hold when drunk. Her cabin stood on what is now the north side of the schoolhouse yard at Bay and Sherman streets; that is approximately where the Tapley School now stands. Her daughter Mary was as distinctive a piece of negro individuality as ever lived on the Hill, showing Indian blood and temperament, perhaps, but a kind heart went with her high-top boots. A son of Samanth (George) killed his brother Horace in defense of his mother, and Oliver B. Morris, his attorney, won fame by the verdict for the defendant.

In the eastern part of Hayti lived "Aunt Jinny", a popular negress who sold cakes and spruce beer to travelers along the Boston Road. Jenny had been a slave, owned by Peter van Geyseling, a Dutchman of Schenectady, New York, but she escaped and sought asylum on free soil. Massachusetts was the first of the states to prohibit slavery (1780) and in the first Federal Census (1790) it was the only one to enumerate no slaves. Eventually, her owner located her in Springfield and successfully contended in the courts that as the woman was his personal chattel, he had a perfect right to return

her to New York, then a slave state. In the interim, however, Jenny had so endeared herself to the local people that a subscription paper was passed about and a hundred dollars quickly raised. Van Geyseling gave a bill of sale for Jenny to the Selectmen of Springfield and she was promptly given her freedom. With her husband Jack, she supposedly lived happily forever after on the shore of Goose Pond, near the present Mason Street.

At the east end of Hayti were those attractive sheets of water known from early Colonial days as Goose Pond. The name itself was a misnomer, for in reality there were two ponds, connected by a narrow stream. They lay close to State Street on the north side of Winchester Park, with Andrew Street on the east and Sherman on the west. Northerly they extended approximately to the present McKnight Street. In high water seasons the ponds overflowed to make a bog of sections of State Street, which was then considerably below the present grade. "Goosie" was a resort widely popular with the pupils of the Barrows and East Union Street schools, especially in skating season.

In the years immediately following the Civil War, upper State Street was an uninviting thoroughfare, choked with weeds. East of Hancock Street there was only a scattering of farm houses all the way to Indian Orchard. Smith & Fuller's omnibus line to the railroad depot on Main Street had its easterly terminus at Oak Street. Eastern Avenue was a sandy cart path leading to the slaughter house of Perkins & Nye and W. R. Purple, which have been supplanted by the buildings and grounds of Springfield College. Where Hope Church now stands was the horse burying grounds of Primus Mason, the negro whose thrift provided Springfield with its Home for Aged Men. At the end of State Street was a huge sand hillock, of which no vestige now remains, from which were drawn annually, thousands of loads of sand for filling.

East of the present railroad, and south of Wilbraham Road and extending southerly approximately to Watershops Pond was a great open space known as Gunn's Pasture. There, in 1862, was trained the 46th Massachusetts Regiment before being shipped South. In more recent years it was much used by the sand-lot baseball teams of the vicinity. Today, it is entirely taken up by residences, save only a small park named Gunn Square.

The railroad itself, commonly known as the New England, was quite a feature of the community. The passenger and freight station at State Street, titled Armory Station, was fully equipped to care for passenger as well as freight traffic. It offered a convenient way to reach Hartford and was much in use for commuting between Armory Station and the road's exclusive depot at Lyman and Spring streets.

One who took an important part in the activities about Winchester Square was a negro, Primus Parsons Mason, in whose honor Mason Street was christened. He was born in Monson in 1817, and when scarcely seven years old went with Jonathan Pomeroy to Suffield, Connecticut, and worked for him for five years. He then ran away

and Pomeroy followed him but young Mason reached Monson first and remained there. When twenty years of age he went to Springfield and settled in the colored colony on the sand lots between Bay and State streets, known as Hayti, and engaged in the business of burying dead horses. If an owner paid well, then a decent burial was given, but if nothing was paid, he would remove the hides and hoofs and sell them. He also collected garbage, bones, old shoes, junk and other rubbish and made many an honest penny. When the gold fever broke out, he went to California where he prospered for a time but returned before the war broke out, absolutely penniless.

For one hundred fifty dollars, he bought in 1860, the land on State Street which he sold ten years later to the McKnights for $17,500. His old homestead and a large share of his property on the south side of State Street were lost to him a few years later after a foreclosure sale. He then bought on the north side and so carefully looked after his property that at his death in 1892 there were sixteen houses on the property besides valuable building lots.

Shortly before his death he executed a will, generously remembering his nephews and nieces, and directing that the balance of his estate, then estimated to be $60,000 in value, be used to provide a home for aged men with no restrictions as to race, color or creed. The Springfield Home for Aged Men on Walnut Street is his monument.

About 1870, culture, with a capital "C", came to Springfield in a large way. War profiteers had taken their families to Europe to "do" the Grand Tour. They had seen paintings in Paris and sculpture in Rome; while in Vienna they had heard the band of the incomparable Strauss. In Germany they had taken the baths. So they returned to "God's country", brimming with art and saturated with mineral waters.

One came back to build his new home at the corner of State and Thompson streets (now the Oaks Hotel) and that his ear might not be offended, the name of Goose Pond was changed to Lake Como. With fond memories of the sculpture they had seen in Italy, cast iron deer graced the lawns of the first families. Dogs of the same material guarded their gateways. By the roadside stood gaily painted images of black faced boys, whose outstretched hands held rings to which a caller tied his horse. They were the most recherché things in the line of hitching posts ever known. In nostalgic moods the returned pilgrims longed for the villas and chalets of the old world. Though they actually called them "shallets", both speaker and hearer knew what was meant, for they spoke the same language. They were ripe for the promoter and ready to inhabit the Queen Anne monstrosities that were provided for them during the next three decades.

In 1860 the population of Springfield was 15,200; in 1870 it was 26,703, having nearly doubled in the Civil War decade. In 1869 the Springfield Street Railway Company was organized and took over the Smith & Fuller Oak Street omnibus line. On March 10, 1870, the first cars of the new railway line were in operation from Hooker

Street, down Main and up State to Oak Street. Thus access was provided to what had come to be known as Armory Hill.

The equipment of the road at that time consisted of twenty-four horses and four bobtailed cars; two ten-footers and two twelve feet long. Compare these with a Ford beach wagon with an over-all length of one hundred twenty inches. In these early days, the city fathers refused to allow the sleighing to be ruined by removal of snow from the tracks and in winter runners were substituted for wheels. It was not until 1876 that the operation of wheeled cars in winter was allowed. In 1879 the abandoned Unitarian Church, at the present west corner of State and Willow streets, burned to the ground. On the vacant lot thus made available, a crude stable was erected where were kept spare horses for supplementary power for cars ascending the hill. With cries and lashings, the heavily loaded cars were drawn up the slope, and on passing the crest, a brief halt was made for a breathing space for the three horses. At that pause it was quite common for one of the trio to fall dead, and for some unexplained reason it seemed always to be the spare horse that met disaster. Even with three horses, it was a grueling task to draw those jam-packed bobtail cars up State Street. Though the weather might be quite inclement, it was customary for all except the most stony-hearted passengers to alight and walk up the steepest part of the hill.

During the first year of operation, this single Main-State Street line carried the amazing number of 257,280 passengers; an average of seven hundred a day. Seven hundred a day at the prevailing eight-cent fare would hardly seem to put the business in the bonanza class and even thirteen years later, with all extensions, the number of cars had increased to but twenty-two. It was a day of small things in a provincial city, yet from those meager beginnings grew one of the important street railway systems of the country.

With transportation thus provided J. D. and W. H. McKnight began development of the district about Thompson, Westminster and Buckingham streets. For years, promoters and boosters labored to attach the title of the "Highlands" to it, but it was far more commonly known as the McKnight district. Between 1870 and 1884, the McKnight Brothers acquired one hundred seventy-five acres at an average price of $1,000 an acre. They laid out or had a large share in the making of Sherman, Bowles, McKnight, Clarendon, Dartmouth, Edgewood, Harvard and Yale streets and Oak Grove Avenue. In those fourteen years they graded and hardened streets and built sidewalks and sewers. Nearly three miles of curbing was set and three thousand shade trees were planted. Beginning in a modest way, they gradually extended their operations which by 1879 had assumed boom proportions. It was then that Goose Pond was obliterated. In 1881 some 22,000 loads of sand were dumped into the twin pools and 5,000 additional loads a year until the completion of the fill in 1883. The existence of the ponds can still be seen in the depression where the southerly section of Bowles Street now is. The filling was drawn from the great sandbank which then stood at the end of State Street.

Bowles Street, Pease Street and the southerly half of Catharine Street were built over these watery wastes and the lots fronting on the east side of Sherman Street are partly located upon the site of the pond.

In 1882 Norman F. Wheeler bought the lot, 50 by 150 feet, on the northwest corner of the present Catharine and State streets, which in the spring and fall was well inundated by the waters. This condition the new owner remedied by hauling in 150 loads of filling to bring the lot up to grade. On this lot he built a wooden building that contained three stores which he rented to E. F. Spicer, druggist; C. P. Alexander, grocer; and L. E. Pease, butcher. Mr. Spicer disposed of his drug business to a Mr. Dale in 1891, and the latter sold the business to Mr. Wheeler, and the Wheeler Drug Store has continued on that corner until recent years. The real estate was bought by David Allen Reed about 1890, and Mr. Reed moved the building to the east side of Catharine Street. Later the brick block known as Westminster Chambers was erected, covering the entire area on State Street between Sherman and Catharine streets.

In 1874 the Street Railway line had been extended to Winchester Park and in 1882, open cars were introduced, the earliest ones having but five benches.

But the great and the successful have ever had their imitators and detractors and the McKnights were no exception to the rule. The swamps east of the district were so wild and unkempt that it was easy for rival operators to spread and keep alive the rumors that bears and wolves had their habitations there. That fiction became so widespread and fearful that the Springfield *Republican,* in its issue of March 10, 1874, sought to allay the fears of anxious mothers. In all seriousness that journal said:

"The popular impression that bears, wolves and other vermin come out of the woods in the vicinity of Lake Como and devour the natives is erroneous. The report probably originated with some malicious persons who are trying to prejudice people against buying lots in that locality."

If one is of the opinion that in those horse and buggy days, the cost of living was far less than it is at present, he may be assured that that happy circumstance did not apply to houses. Prices then were quite equal to those of any recent prewar year, though the buildings of that older period had few interior luxuries. There was but one bathroom, and that with crude equipment; a modest heating plant that served but a part of the rooms; no electrical installations; no hardwood floors; little plate-glass. One requisite not now included, was a marble wash-stand with hot and cold water in practically every chamber. Otherwise the interiors were quite simple.

In its issue of June 12, 1875, the Springfield *Republican* gave a comprehensive review of the local real estate situation at that time and said:

"The building prospects in the city for the present year are much more flattering than many people suppose and a large number of really fine structures are already in process of construction. Wages are low and building material is fully as cheap as it has been for a number of years. During the past season, no section has been so greatly improved and built upon as in the vicinity of Lake Como. Shades of Samantha Sands, what a change has taken place in the aspect. At the corner of Thompson and Bay streets, N. I. Hawley has erected a two story dwelling at a cost of $7,000. On Westminster Street a house is being finished for Charles W. Rice, two stories high, with bay windows and will be worth $5,800 when completed. At the corner of State and Hawley streets, W. H. McKnight has built a handsome two story, square roof house at a cost of $7,500. An elegant two story villa with a tower has been commenced on State Street for W. W. Norton and will cost $8,000. On Florida Street a house and barn for Sanford J. Hall will cost about $8,000. Andrew J. Wright is completing a brick house and barn on Bowdoin Street, costing about $16,000. The house is two stories high with pleasantly located bay windows and is being well constructed."

These were all modest homes and apparently the prices here given are exclusive of the cost of the land.

Springfield folk became quite bath-conscious while in "Urup". Prior to that experience, except for a favored few, they had taken their Saturday night bath in a round, wooden washtub, brought into the kitchen for the occasion. For their other necessities, they were accustomed to going "out back", all except those in the luxury class, whose backyard accessory building was made a part of the back veranda.

Now they demanded a bathroom, and such was a feature of the McKnight house; strictly in the singular. True, the tubs were of tin, thoroughly boxed in, as were the flush toilets. It was to be another dozen years before "open plumbing" was common. But there was both hot and cold water as well as waste pipes. One affluent local citizen imported from Italy a solid marble bath tub, only to find that the stone absorbed all the heat from the water, leaving him nothing but a cold bath. In disgust, the tub was removed from the home and thereafter served as a public drinking font for horses.

Yet, even before those progressive days, Springfield had been well aware of the public baths then quite common in New England. As early as 1851 such an establishment was in operation on South Main Street, just below York Street, and if we are to take seriously the statements of the proprietors, it was an amazingly elaborate affair for a village of twelve thousand inhabitants. However, in such a tiny community the facts could have been so readily ascertained, that undue exaggeration seems hardly probable. In their plea to the great unwashed of the vicinity, the physicians of the Springfield Water Cure asserted that "The building is two hundred feet long by fifty feet wide, three stories high, with nearly fifty pleasant, airy rooms

for the accommodation of patients, with bathing rooms for the sexes entirely separate; with large dressing rooms connected with them and as large a supply of pure soft water as can be found in the country. All the various baths that can possibly be useful, will be found at all times in readiness, and the very best attendants always on hand."

Terms varied, from daily charges to weekly rates of five to ten dollars, with patients requested to each furnish two linen sheets, two cotton sheets, two woolen blankets, two comfortables, a supply of towels and linen for bandages.

Springfield's Town Brook flowed through the premises of the Water Cure. For two hundred years it had been the town's water supply and about everything from clothes to carcasses of slaughtered animals was commonly washed there. It comprised the water holes where youngsters learned to swim and where they angled for trout. Cows and pigs wallowed in it. Yet from it came this "large supply of pure, soft water", for the benefit of the ailing. It is apparent that the meaning of the word "hygiene" had not yet registered.

Early attempts to develop the Hill District were retarded by lack of a water supply. Prior to 1843, Springfield people had been content to draw water from brooks, springs and wells, but that year Charles Stearns created the Lombard Reservoir and laid about eight miles of hollow-log pipes through various streets. In 1848 the system was taken over by the Springfield Aqueduct Company and at a hearing in connection with that transfer it was testified that "work was commenced in August, 1843, and by the beginning of winter, water was available at the depot and hotels and in several neighboring streets, supplying about 150 families. Length of pipe line, over eleven miles. Four brick reservoirs in use, holding a total of over 4,000 hogsheads and supply in dry times exceeds over two hogsheads a minute. Pipe made of pine timber, charred on the inside. More than twenty-five tons of lead pipe used for service pipes. More than twenty tons of iron bands used for reinforcing wood pipes. More than $1,900. worth of brass work used, mostly for faucets".

Unfortunately, the water could not flow above the Spring Street level, so the plain on the hill above was forced to rely on wells. A great underground cistern was established at State and Stebbins streets, but that drained the water from adjacent individual wells so that its abandonment was imperative.

In 1873 the city bought out the entire system and proceeded to construct an adequate reservoir in Cherry Valley in the town of Ludlow, which was completed in 1875. However, because of lack of experience, the building of that reservoir was not intelligently done, with the result that decaying vegetable matter gave to the water a nauseous odor that rendered it unfit for drinking. Hence, in each and every house thereafter built by the McKnights, a well was dug, directly beneath the kitchen, walled with brick and sealed over by the cement floor of the basement. From this, a pipe led to a hand-powered pump attached to the kitchen sink and water for drinking and culinary purposes was thus supplied. Though the pumps have

disappeared, the wells remain in practically every McKnight-built house of the period.

In time, the purity of this well water became questioned and drinking water from a spring at the head of McKnight Glen, adjacent to Dartmouth Terrace, was peddled in the neighborhood. Some forty years ago, the cause of a typhoid epidemic was traced to this spring and it was closed and sealed and eventually the waters of Little River became available to the residents.

As a whole, the interiors of the new order of houses were something quite fearful and wonderful. These cosmopolites talked glibly of dadoes and friezes such as they had seen in old-world buildings and they bought imitation ones of paper by the roll and had them pasted on the walls. For the rest of the side wall, a God-awful material known as linerusta-walton often served. It was a heavy pulp board, stamped and colored to imitate stamped leather. Occasionally a "wainscoting" composed of black walnut, in upright strips, some four inches wide, would cover the lower part of the side walls. If something of superelegance was called for, alternate strips of black walnut and golden oak were used. On the lower floors, Brussels carpets were tacked down, from mop board to mop board. In the upper rooms, ingrain carpets were applied in a similar manner. Once a year the multiplicity of tacks were laboriously withdrawn; the carpets taken outdoors to be beaten and swept. With "carpet stretchers" they were returned to place and tacked down again for another year.

Engravings and German lithographs that had adorned papered walls were cast into the limbo to be replaced by gen-u-ine oil paintings. Wholly unheralded, a benign providence brought to Springfield at that crucial hour, a self-styled art expert to save those innocents from themselves. Having associated himself with the proprietor of a local store, a group of American painters was prevailed upon to consign to them in 1878, some fifty paintings to be sold on commission. All were in "real" gold leaf frames, so ornate as to catch and retain the maximum amount of dust. Of these, thirty-six found purchasers, and as a result, for years thereafter an annual art exhibition was a feature of the social life of the city, the opening evening being by invitation only and much like the "first night" of a play. Hence, when the great public crowded in on the following day, its appetite was unduly whetted by the number of "sold" tags on the paintings. During thirty years, more than three thousand representative works of American artists were thus brought into Springfield, of which one-third found permanent homes.

A contemporary said, "In all this time, though often tempted to exhibit foreign paintings, the associates have remained true to patriotic feelings, the only European work to receive a place in these exhibitions during these many years being a landscape by Rosa Bonheur". But the public had been well-trained and would have none of it, so that it was returned to its creator, unwanted.

Prime favorites were the so-called street urchins of J. G. Brown, so neat, so scrubbed and with such rosy cheeks that no housewife could fail to crave one for a household pet. For real tycoons, this understanding artist immortalized on canvas the progeny of his wealthy patrons.

The yearning for Tait's sheep pictures came to be almost a craze. A citizen who did not own at least one, could hardly be said to have "arrived" at all. It has been said that these sold by the yard but this is not true. Actually, the price varied according to the number of sheep shown; one sheep, so much; two sheep, twice as much. At one period a one-sheep Tait could be had for eighty dollars including frame. One village cut-up proudly displayed one with six white and one black sheep.

It was the era of the rugged individualists and the self-made men, who boasted that they had left school at the age of twelve. They maintained that culture and breeding had no practical value, yet were a bit nonplussed when reminded of the thought they gave to the ancestry of their horses and hunting dogs. In those days, there was little of honor in business. Affairs were conducted as close to the legal borderline as would benefit the operator, yet not entangle him with the law. Close friends had no hesitancy in setting traps to "trim" each other, yet no feeling of resentment was thus engendered, but rather one of sly admiration for a competitor who could engineer a successful coup, and such contentions never interfered with social relationships.

A high school education was deemed more than sufficient preparation for the life work of the average boy, even those from well-to-do families. Colleges were for only those destined for the bar, the church, or the medical profession.

West of Hayti was the region known in olden days as Florida, or as it was more commonly called, Floriday. It was bounded easterly by Hayti at the present Thompson Street, southerly by State Street and westerly by the ravine between Magazine and Bowdoin streets, known as Squaw Tree Dingle, which, now filled, in part forms the triangular playground at Magazine Street and St. James Avenue. Northerly, Florida extended well towards Worthington Street. It was intersected by the road known to the first settlers as "the path to Schononganuck", which in 1827 became Factory Street and is now known as St. James Avenue. In 1728 Thomas Ingersoll sold the tract to James Bowdoin of Boston, hence the names of Florida and Bowdoin streets.

In the seventeenth century a stream known to the early settlers as Garden Brook had its source in the swamp at Dirty Gutter, near the St. James Avenue dry bridge, and flowed westerly nearly to Main Street, somewhat as the Boston & Albany railroad now runs. One of the chief tributaries of Garden Brook, had its rise at the head of Squaw Tree Dingle, flowed northerly and entered Garden Brook just east of where the Hampden Paint Company now is. This dingle brook, now covered, was a fine trout stream within the memory of

people yet living. After the Armory was established, the Federal government controlled the tract at the head of the dingle, long known as the "Spring Lot." Here the stream was dammed, and a roadway built along the crest of the dam, became the easterly section of Lincoln Street. The resulting pond was later reduced in size and bricked up with a domed roof. This spring house was often mistaken for the powder magazine that gave Magazine Street its name.

Actually the magazine was west of Magazine Street and on the Armory grounds. This was the Revolutionary magazine, the plans for which were drawn by Col. Thomas Dawes and which have been preserved. In 1790 Samuel Davis of Plymouth, a casual traveler passing through the town, had leisure to pause and make a sketch of it and this drawing confirms the fact that the actual building coincided rather closely with the original plan. Over the door of this building was a stone on which were cut the words, "Erected by Act of Continental Congress." After this building was torn down in 1842, this stone became a part of the base of the iron fence at the corner of State and Byers streets. It has been said that in 1870, when the gateway at that corner was cut through that the lettered stone was removed and taken to the dump. However, when in 1935 there was a proposal to widen Byers Street, the Armory officials hoped that the work would uncover the stone and so retrieve it for the Armory Museum. Unfortunately, the project was never carried out so that the stone still remains hidden.

This magazine was given up because of protests at having such a large store of powder in what had become a settled community, and a new one was built in the isolated valley of Garden Brook, near where the Standard Oil Company is on Albany Street. A roadway to this new magazine was laid out, running northerly from Factory Street (now St. James Avenue) which became Florida Street and this accounts for the presence of that street on maps of a hundred years ago. Due to the abrupt descent to the valley, still later a road was laid out through the valley of McKnight Glen, which provided more convenient access to the magazine.

Evidence is not readily available to show just when the various Government magazines were built, abandoned or demolished. A map of the *Public Land* drawn in 1830 by Lieutenant Linnard and now in the Armory Museum shows three. One is on the Armory grounds, on the westerly brink of Squaw Tree Dingle and is designated as the "old magazine." This is, of course, the Revolutionary magazine. West of it is one designated merely as a "powder magazine", as is the third one in Garden Brook Valley. Apparently all three existed in 1830, but which actually held powder at that time is not indicated.

North of Hayti and Florida was the tract known for the past hundred years as Ingersoll Grove. It was bounded on the south by Worthington Street and on the west by Florida Street. Easterly it extended to and perhaps a bit beyond the ravine now known as McKnight Glen. The north boundary was the brow of the hill overlooking Garden Brook Valley. About 1845 Solomon Hatch sold it to

Major Ingersoll who was storekeeper and paymaster at the Armory, 1841-1882. Later it was found desirable to have the powder magazine nearer the government Watershops Plant and as Major Ingersoll then owned a suitable tract in that locality, an exchange was made by which he added the Garden Brook Valley tract to his holdings on the hill above.

Major Ingersoll had a considerable part in the beautifying of the Armory grounds, the planting of trees and the grading of the slopes to Byers and to Federal streets.

Through the ravine now known as McKnight Glen he built the two roads still in use; one east and one west of the brook. Adjacent to the west road he built a sumptuous summer house. North of that point the two roads met as they do today, and passing under the New England railroad tracks, led to a mineral stream about where Albany Street now is. This spring was surrounded by a stone curbing and surmounted by a rest house. On the plain above, overlooking the Glen, shade trees and orchards were planted. Winding paths led into the Grove from both Worthington and Florida streets. An open-air dance floor was installed. In all, it was a pleasant resort, freely used by the public. The last festive event held there was the lawn party of Christ Church, June 13, 1879.

About 1867 the property was sold to Hinsdale Smith and others, who sold it to Henry W. Phelps in 1872. Later it was owned by Willis Phelps and William Mattoon. These owners had in mind various projects for its use. At one time it was proposed to locate the State Insane Asylum there instead of at Northampton. Its use as a site for the Springfield Hospital was suggested. More recently efforts were made to use it as a cemetery and still later as a public park. But the establishment of the New England Railroad tracks in 1875 acted as a deterrent and these schemes all came to naught, so that the property remained unused and was reduced to an unkempt and run-down condition.

In 1884 the McKnight brothers acquired Ingersoll Grove, Florida Street, with its fine old shade trees, was curbed and hardened. From it, a new avenue was cut, winding about the head of the ravine and called Ingersoll Grove Street, as it is today. The summer-house was restored and repainted. Even the mineral spring was rejuvenated. The source of the brook in the Glen was found to be a bubbling spring and its waters were peddled for sale until about 1906 when a typhoid fever outbreak was traced to it. Some of the more pretentious McKnight houses were built there and great expectations were the order of the day. It was prophesied that in the near future, travel over Worthington Street would exceed that of State Street. All it needed, said the prophets, was transportation facilities and the McKnights proposed building a Worthington Street horse railroad and presenting it to the Street Railway Company, but it remained for the railway company itself to do this. Originally the line terminated at the foot of the long hill and it was not until 1892, after the lines had all been electrified, that it was extended to the McKnight district.

The McKnight brothers had come to Springfield in their youth from the tiny rural hamlet of Truxton, New York, and engaged in various mercantile enterprises that eventually fell on adverse days. Nevertheless, through them they were given an insight into the unique opportunities offered for real estate development in Springfield. Excellent railroad transportation facilities were available and two sizeable hotels offered travelers comforts seldom found in a city of its size. Whenever possible, "drummers" planned their itineraries so as to weekend in the city. "Knights of the Grip", they called each other, perhaps a bit facetiously but none the less affectionately, in reference to the gripsack, or personal valise that was so much a part of their lives. They were men comparatively young in years with incomes exceeding the average. Whatever they may have lacked in formal education was largely offset by the liberal education acquired in their daily contacts. On the whole, they were of the stuff that made desirable citizens. As they became familiar with the cultural and amusement features to be had, they craved them for their wives and children, only to learn that those cravings could be easily satisfied. It was made very easy for them to become citizens of Springfield.

On May 13, 1884, the *Republican* reported that:

"For the five years 1879-1883, the increase in the assessed valuation in the district in which the McKnights have worked averaged about $100,000 a year, or a total increase there of seventy-five per cent. A single tract of four acres which they have transformed, has been raised from $2,000 to $36,000 in the assessor's valuation. More than three-quarters of the houses in McKnight land have been bought by recent comers to the city, partly business men and in a smaller part by people who live on their incomes and have been attracted to this city by the pleasantness and comparative cheapness of the residences procurable. The country has a large floating class of people and it is to supply their requirements and draw them to the city that the McKnights propose especially to labor."

One by one, those "drummers", those commercial men, became permanent residents and on their journeyings far afield they spread the news that brought others. It was a veritable endless chain. In the 1890s their number had increased to an extent that made possible the formation of a local Commercial Travelers Club, with Main Street quarters that included reading and writing rooms as well as the inevitable billiard and pool tables of the period. By 1895 the membership was over two hundred and annually, ten thousand cloth-bound copies of a *Souvenir Booklet* were sent about, telling of the advantages offered by the city, its schools and its parks. The "City of Homes", they called their adopted abiding place. By the turn of the century, it was commonly said that seventy-five percent of the houses east of Florida Street and north of State Street were owned and occupied by traveling salesmen.

One thing that made this paradise possible was the eagerness of Springfield's savings banks to loan money on these brand-new quick-selling, up-to-date houses. Eventually, envious banks of other localities in western and central Massachusetts, even those of Worcester, overbid the local banks, loaning even more liberally.

To the romantic small boy of the Hill District, no Saturday excursion held greater appeal than did a visit to John Howell, survivor of the *Charge of the Light Brigade,* who welcomed all youngsters to his picturesque home on Upper Saint James Avenue.

Old "Long John" Howell, as he was called, was the most interesting and battle-scarred of the veterans of Springfield and many people,—pleasure-seekers walking on the country road by his house,—stopped to greet the tall old man leaning over the fence and to hear his tales of war. He began his service with the Light Brigade when he was but twenty-two years old. Since then he had been in thirty-seven battles, including that of Balaklava and Cold Harbor and several others in our Civil War which have not been popularly regarded as playgrounds. He himself did not escape during his long service, having three bullet wounds in his right ankle, in which the bullets still remained, and a bad gash in his neck, cut by a shell. These wounds were all received in our Civil War, in which he served, first in the 6th and again in the 25th Massachusetts Regiment. He did not receive a scratch in the famous charge, and said very few of the survivors did, for the reason that every man that went off his horse was mince meat in five seconds.

In 1882 Howell had given up his trade as a carpenter and had been located at the one-story house on the extension of the avenue. He was a remarkable personality; tall, standing six feet three in his stockings, and very erect to the day of his death. He had a stern, rugged face of the old-fashioned English type, ornamented with cropped mustache and close side-whiskers. He was a man of strong opinions and uncomfortably regular habits. It was his boast that for 27 years he had never touched a glass of liquor, smoked, chewed or given away to the allurements of snuff. One of his most peculiar traits was in the arrangement of his sleeping hours. At five o'clock, winter and summer, he closed the shutters of his house and went to bed. At four o'clock in the morning he was up and ready for work again.

John Howell was born in County Hereford, England, and when but a boy went to London to learn the carpenter's trade. On July 13, 1846, he enlisted at the Marylebone police station, being then only twenty-two years old. As luck would have it he was assigned to the 4th Dragoon Guards of the 11th Hussars, or, in other words, the Light Brigade. For eight years he lived in English barracks, but in 1854, the Guards, 1,100 strong, were sent to the Crimea. Then, of course, came the charge of the Light Brigade. The preliminary work at Balaklava had dealt harshly with the brigade, and only 600 of the 1,100 went into action on October 25, 1854. "Long John" was as much in the dark as to who was responsible for the mistaken charge

as all the rest of the world. As he remembered it, Lord Cardigan, when he heard the order, looked over the troops and cried: "Here's the last of the Cardigans; here's the last of the guards," and then they charged.

It was not half a league to the masked batteries, as Tennyson's poem has it, but about three-quarters of a mile and back. There were one hundred fifty to reach the starting point. Horses and men were torn to pieces by the grape and canister and piled into great heaps. The charge was across a country full of light brush, the Guards were completely flanked, the guns,—many more than had been expected,—being concealed in the bushes on both sides all the way and in front as well. It was like shooting wild fowl from a blind for the Russians. Howell remembered vividly the privations of the remaining months in the Crimea. Four vessels loaded with clothing and supplies for the English troops were lost at sea and although little account is made of this in the histories, it caused terrible suffering among the troops to whom the goods were consigned. He remembered also the battle on the heights of Inkerman, November 5, 1854, in which the French and English defeated the Russians and which was the last battle, when the Light Brigade was called on for a cavalry charge.

The English troops returned to Chatham barracks February 14, 1857, and Howell, considering his ten years and nine months of military experience justified him in taking a slight vacation from war, withdrew from the service and started for America. He brought up in Worcester, where he worked at his trade as carpenter until the beginning of the Civil War. He then enlisted in the 6th Massachusetts Regiment, experienced the famous march through Baltimore and at the end of three months came back and settled in Springfield. He was working as a carpenter on Tinkham's Block when the war fever came upon him again, and he re-enlisted in Co. E of the 25th Massachusetts, in which he served until the end of the war. He was in the battles of Roanoke Island, Kingston and Cold Harbor, and many other less important engagements. At the close of the war he returned to Springfield and worked as a carpenter until in 1882 he settled on his little farm on the St. James Avenue extension. He married in Springfield and his wife survived him. They had no children.

In 1898, when the United States Battleship *Maine* was blown up in Havana Harbor and the scent of battle-smoke was in the air, Howell was seventy-five years old. With his horse and buggy he hastened to the recruiting office, in all confidence, to offer his services. When the offer was sympathetically declined, his resentment was most emphatic. Before the end of the year, the disappointed old man, for whom there was no place in the army, gave up all effort to live, and died on December 20, 1898.

However, in the 1870s not all the optimists and boosters were operating on Armory Hill. To encourage another group, the street railway was in 1874 extended down South Main Street to Mill River, for George E. and James L. Howard had begun the development of

the lower part of Crescent Hill, on Mill Street. The land on both sides of Mill Street, from Pine to Locust, had been purchased by the Howards for $50,000 and they later increased their investments in real estate and manufacturing property at the South End to more than a million dollars. The hill was cut down as much as fourteen feet and was brought to a gentle slope from Pine to Locust Street, bringing out unexpected views of the city, and the river. The work was done under the direction of a Mr. Weldman, who was connected with the then famous landscape gardeners, Vaux and Olmstead of New York, and cost $25,000.

This locality has a unique story of a bygone age. On the northwest side of Pine Street, just east of its junction with Mill Street, a deep ravine debouches to the plain at Acushnet Avenue. In some long past geologic era, this was the bed of Mill River. At a point near the foot of Maple Street, the river then turned northerly, crossed the present Mill Street, the Arthur Murray grounds and Pine Street. Then it cascaded through this ravine to the lower level, passed to the north of the hill at Locust Street and entered the Connecticut south of York Street. The hill at Locust Street was then connected with and was a part of the higher ground at Fort Pleasant Avenue.

At a later date, by some freak of nature, this course of the river became blocked and to free itself, the stream cut a new channel along its present course, wearing away the backbone connecting Locust Street hill with the higher ground south of it, and so isolating that hill and thus forming the Mill River known to man.

The Federal Armory

Though the surrender of Cornwallis and his army on October 19, 1781, brought an end of hostilities, yet peace was not assured until the signing of the Treaty of Paris on September 3, 1783. Washington was inaugurated as the first President of the new republic on April 30, 1789, and Gen. Henry Knox became Secretary of War. Undoubtedly, acting on their recommendation, in April, 1794, the Federal Congress ordered the creation of two establishments for the manufacture of arms and munitions, one at Springfield and one at Harper's Ferry in Virginia.

No small-arms whatever had been made at the Continental Armory at Springfield, though a number of brass cannon had been cast at Pynchon's old furnace on Mill River. However, thousands of captured guns had been repaired there and competent artisans were available, a number of whom had come from France with the guns imported from there during the war. In that era, establishments similar to modern manufacturing plants were practically unknown, this being true of all manner and sorts of trades.

In 1776 Thaddeus Richardson dealt in shoes at his house in Stoneham, Massachusetts, buying leather and distributing it among a number of workers who cut and prepared it at home. He then repeated his calls, collecting the results, which he distributed to

another group of workers. Again he made his rounds to collect the finished products, which he transported to the most available market. This manner of producing shoes survived and continued into the nineteenth century and one may see on the grounds of the Douglas Shoe Factory in Brockton, the little "shoe-house" in which the founder of that company originally did business at his farm-home.

In Chicopee, Massachusetts (then a part of Springfield), in 1801, Levi, William and Joseph Chapin built a small cotton-mill, housing a carding machine and two spinning frames. The yarn that they made was given out to local women, to be made into cloth on hand looms in their homes.

In 1776 the town of Springfield, being in need of a number of guns, presumably for the use of newly enlisted recruits, contracted with local specialists to provide them. Horace White supplied "twenty-five gun barrels and ramrods at £35, Martin Ely, twenty gun locks and rigging at £25", while Reuben Bliss was paid £8 "for stocking twenty-five guns and for sundries" which included assembling the various parts into complete guns.

The method of making watches, down to nearly a hundred years ago, well illustrates the ways and means of manufacturing as followed by our fathers. In their day, watches were almost wholly a product of Switzerland, where the various parts were made in unrelated home workshops and brought to a central point for assembly into the complete timepiece. Being entirely hand made, no two of these parts were identical and much hand work was required to fit them for assembly into a complete whole.

The making of watches by machinery was first suggested by Aaron L. Dennison, a Boston watchmaker in 1848. His original plan was to gather under one roof, several labor-saving machines which were used in Switzerland, for some of the processes of watchmaking, to supplement these by new contrivances and to run them all by power under one roof. He estimated that in this way he could turn out ten watches a day, but his scheme was considered impracticable. However, he managed to form a small company, which built a factory at Roxbury, Massachusetts. But the Swiss prohibited the exportation of machines, models or drawings, so that the pioneer company was obliged to construct its own machines with which the first machine-made watch was turned out in 1853. Subsequently, the works were removed to Waltham, Massachusetts, and there the American Watch Company was incorporated. By 1888 there were in the United States, nine factories, having a total annual production of one million high-grade watches.

It has been said that this was the first appearance of interchangeable parts which made mass production possible, but the following evidence shows conclusively that such honor and credit rightly belongs to the United States Armory at Springfield, and in a much earlier period.

In compliance with directions from Congress, application was made to the town of Springfield for liberty to purchase land on which

to establish the new armory, preference being expressed for that section of the Training Field on the Hill previously occupied by the Continental Armory. This resulted in a Town Meeting being held on March 18, 1795, "to see whether the town will sell or lease to the United States of America the land adjoining to the magazine and choose a committee for that purpose and also to choose a committee to look into the matter respecting the land the town heretofore sold to said United States."

At that meeting it was "voted, that a committee be appointed to look into the matter of the land in the Training Field and survey it and examine into the state of the Continent with the United States and report the expediency of selling any land to the United States."

Timothy Dwight, president of Yale College, left a picture of the establishment at that period saying that on "Saturday, September 24, 1796, we visited the Arsenal. This consists of two slight, ordinary buildings, of considerable size, standing less than a mile east of the town. In these buildings there were, at this time, eleven thousand stand of arms, well made and in excellent order, together with a considerable number of field pieces, mortars, howitzers &c. A company of soldiers is kept here as a guard, who are accommodated with barracks in the neighborhood." Dwight later reported that in 1810 "the number of muskets now in the arsenal is ninety thousand and that ten thousand are made annually."

There being no record found of any sale or lease of the Training Field to the Federal government nor evidence of any payment for its use, a Town Meeting was held on April 7, 1800, "to see whether the town will take any measures to obtain compensation for such part of the Training Field as is occupied by the United States, and to chose a committee for that purpose and empower such committee to convey the same."

The committee then chosen reported that "a contract was begun for a lease of ten acres of the Training Field for the use of the United States,—no lease was ever executed, they cannot ascertain what part, if any, of the consideration was ever paid. They recommend to take effectual measures for obtaining a reasonable compensation for said land and also other parts of the Training Field now occupied by the United States."

In addition to that part of the Training Field on the Hill, now commonly known as the Armory Grounds, in June, 1795, the United States purchased an acre and a half on Mill River, in the vicinity of the present intersection of Main and Locust streets. This became known as the Lower Watershops. In succeeding years, two other power sites were acquired; one for the Middle Watershops, near Pine and Mill streets and one for the Upper Watershops at the site of the present establishment on Allen Street. In 1857 the Middle and Lower shops were consolidated with the Upper shops, which stood on the site of the present plant. During the next five years the extent of the buildings were increased, the height of the dam was raised and

the bed of the stream lowered so that the total head of water was thirty-five feet.

A description of the Armory in its early days is given in *The Pocket Gazetteer of the United States,* published in New Haven, by S. Wadsworth in 1826, which says that it is "pleasantly situated on elevated ground, half a mile east of the village. The buildings are arranged on a large square and consist of one brick edifice 204 feet by 32 feet, two stories high, occupied by lock filers, stockers and finishers; a brick forging shop, 150 feet by 32, two stories high, the second forming a spacious hall devoted to religious worship; a brick building one hundred feet by forty and two stories high, used as a depository of arms; and numerous smaller shops and stores. The waterworks are situated on Mill river, about one mile south of the Arsenal, in three different sites, called the Upper, Middle and Lower Watershops, the whole comprising five workshops, twenty-eight forges, ten trip hammers, eighteen water wheels and exhibiting the greatest of mills and other waterworks to be found in the state.

"In this establishment are employed from 240 to 250 workmen, who complete, on an average, about forty-five muskets daily. The water privileges already owned by the United States, will warrant the extension to 30,000 stands annually. From 1795 to December, 1817, there had been completed in this manufactory, 128,558 new muskets and 1,202 new carbines, and 45,700 muskets had been repaired. The whole expenditure during the same period, including the first cost of the establishment, was $1,820,120."

David Ames of West Bridgewater, Massachusetts, was appointed to establish and superintend the new National Armory, which post he held from 1794 to October 31, 1802. This was in the early days of the machine age and he took full advantage of the opportunities offered him. Though Watt brought out the steam engine in 1765, it was not until 1799 that the high-pressure engine was available. In 1785, the invention of the power loom served to partially emancipate the housewife. In 1793 Fulton completed his steamboat. By 1828 the first railroad in America was in successful operation. New days and new ways were in the offing and David Ames had the vision to profit by the situation, being in close touch with that great circle of mechanics known as "natural inventors." Patents were no novelty to those Yankees, for early in 1641 the first patent granted in this country protected a Massachusetts man on a new process for making salt.

In 1788, at Sutton, Massachusetts, there was born a lad named Thomas Blanchard who at an early age gave evidence of becoming a mechanical genius. In 1806, at the age of eighteen, while associated with his brother in the manufacture of tacks by hand, he invented a tack-making machine, the product of which greatly exceeded the older method, both in time and perfection. The patent for this machine he sold for $5,000 and used the proceeds to finance the building of a lathe for turning irregular shapes, shoe lasts being the object he had particularly in mind.

Prior to 1836, the affairs of the United States Patent Office were carried on by a single clerk in the office of the Secretary of State. In lieu of the great corps of examiners that today consider an application for a patent, provision was made for referring conflicting claims to a group of especially selected arbitrators and referees. Applicants were required to submit a model, not to exceed a foot in the length of any dimension. Toward the end of the past century the number of models exceeded 200,000 and storage space became so crowded that it was ruled that, except in extraordinary circumstances, drawings should suffice. Of the models then in keeping, such as were wanted by the patentee or his heirs, were placed at their disposal. Many not called for found their way to the Smithsonian Institution as was eventually done with the Thomas Blanchard lathe.

In 1815 Col. Roswell Lee became the sixth superintendent at the Armory, serving for eighteen years and dying in office in 1833. During his service he became quite intimate with the young mechanic Thomas Blanchard, and more than one labor-saving device or process accrued from their frequent conferences. The matter of stocks for guns had long been a problem for both makers and users. The early settlers found that the wooden stocks of the guns they brought with them became warped and split when subjected to the intense cold of the New England winters. After trial, it was found that the wood of the American black walnut met every requirement and it has ever since been used for that purpose. But the gun stock itself still remained a peculiar shape to fashion and had always been formed with hand tools.

On November 18, 1818, Colonel Lee wrote to Blanchard as follows:

"Mr. Thomas Blanchard,

Sir,—I wish to employ you immediately, for the purpose of putting in motion, a draw-grinding machine and perhaps one for turning barrels. Please inform me when you will be here and what materials will be necessary for the machine and dimensions."

To this Blanchard replied that he was busy with the problems of the unfinished lathe, but expected that he would shortly have them solved, at which time he planned to personally take the model to Washington, and on January 20, 1819, Lee wrote to Blanchard,— "I have to request you will call this way with your machinery when you go on to Washington, or if you cannot bring it with you, I will endeavor to call on you in Millbury. Please write me by return mail." In due course Blanchard journeyed to Washington, where there was cited against his patent application, an interference in the claim of one Asa Kenney. To make it as convenient as possible for all concerned, Colonel Lee was appointed to represent the Federal government as arbitrator in the controversy over conflicting claims. On June 14, 1819, Colonel Lee outlined the situation to Blanchard, as follows:

"I have received from the Honorable Secretary of State, the appointment of arbitrator on the part of the United States relative to your claim for a patent for the invention of a machine for turning gun stocks, which interferes with a similar claim made by Asa Kenney. Please inform me by return mail when you will be able to attend to this business with your arbitrator and witness and I will forthwith transmit to you the necessary papers, appointing the time and place."

A letter from Lee to Blanchard, dated June 18, 1819, read as follows:

"I have received yours of the 9th instant and one you brought from Colonel Wadsworth and request you will immediately proceed to construct a machine for turning musket stocks. It is quite immaterial with me whether you make the patterns here or at home. I wish you to inform me what materials it will be necessary for me to procure for the machine and I will endeavor to have them in readiness for I wish to have it in operation as soon as possible. Relative to the time of deciding the interfering claims between yourself and Mr. Kenney, I wish to make it convenient for both and when I have notice that you both are in readiness, I shall immediately attend to my part of the duty. I send you by this mail a letter which came under cover directed to me and I did not know it was for you until I opened it. It seems Colonel Wadsworth expected you were here. As the letter is somewhat important, I have thought it best to forward it to you not knowing how soon you will be here."

Being anxious to have the new lathe installed in the Armory, as soon as possible, Colonel Lee appealed to Col. William Thornton, supervisor of the patent office, writing him on August 17, 1819:

"I am now waiting the result of the Blanchard and Kenney application for a patent for the invention of an improvement to a machine for turning musket stocks with a view to put one in operation and will thank you to inform me when a patent is granted, that I may employ the patentee for the above purpose."

On January 20, 1820, a patent on the machine was issued to Blanchard and a lathe was installed at the Armory, but its operation was not entirely satisfactory. On March 25, 1820, Lee wrote Blanchard,—"The stock turning machine operates pretty well. I have heard from Mr. Pomeroy, who states that he shall be here in a short time. If you cannot begin our screw machine by the first of May, I shall have it made by other persons."

On May 5, 1820, Colonel Lee again wrote Blanchard:

"Yours of the 29th came duly to hand. I do not wish you to commence the screw machine at present. The stock turning machine will not prove so useful as was anticipated by you. I enclose you $250 as part pay for the privilege and have made out the amount at two cents per stock, to be corrected hereafter if necessary."

As the product of the lathe continued to be far from satisfactory, various clever mechanics of the Armory force contributed their bits to the common cause and after experimenting several months, Colonel Lee wrote to Blanchard on March 24, 1821:

"Your letter of the 19th of February was received while I was absent on a journey to Washington. Our turning machine is ready to be put in motion. We have been waiting for you expecting you would return this way from Pittsfield. I shall set it to work soon and I have no objection to adopt such improvements as you are able and willing to make."

The mind of the inventor being then wholly occupied with other affairs, he suggested that certain mechanics at the Armory complete the lathe, to which Colonel Lee replied on April 17, 1821:

"Yours of the 13th is received and I have only to say that I wish you to recommence your operations here as soon as possible. I cannot very conveniently spare Mr. Weatherhead to assist you in putting up the machine, therefore I think you had better bring a hand with you."

Colonel Lee's patience was at an end, and on May 12, 1821, he mailed the following letter:

"I have been waiting so long for you to set your machine for turning stocks in motion that my patience is wholly exhausted. I have now to employ an additional number of stockers or our work must fall very much in the rear. If you are ever to put the machine in motion here, it must be in the course of this month. I cannot suffer so much disappointment by delay."

Thus prodded, Blanchard for a time gave his entire attention to the refractory lathe and eventually had it operating smoothly and efficiently. Subsequently it came to the attention of European arms manufacturers and today, in all the world, wherever guns are made, it is with the aid of a Blanchard lathe.

The Mr. Weatherhead here referred to was Joseph Weatherhead, who in 1815 was employed as a machinist at the Watershops. Being an excellent workman, with good executive ability, he was appointed as foreman and in December, 1825, became master-armorer, holding that office for eight years. In all, he was an Armory employee for thirty-two years. He was one of a group of men who, during the first fifty years of the establishment, completely altered the process of gun making, the Springfield Armory becoming the envy of European manufacturers.

Cyrus Buckland was first employed at the Armory in 1828 and shortly thereafter began the series of improvements in gun machinery in close association with Thomas Warner, later master-armorer, who began the task of creating machinery for making every part of the

gun interchangeable. After the resignation of Warner in 1842, Buckland designed and completed a series of intricate machines of which the lock-plate bedding-machine is notable. In a report made in 1841, acting-superintendent Colonel Talcott said:

"The construction of an entire set of machinery for finishing the bayonet in all its parts and thereby dispensing with the process of grinding, so ruinous to the health of man, deserves a medal of gold from friends of humanity. Thomas Warner is entitled to all the credit of these improvements."

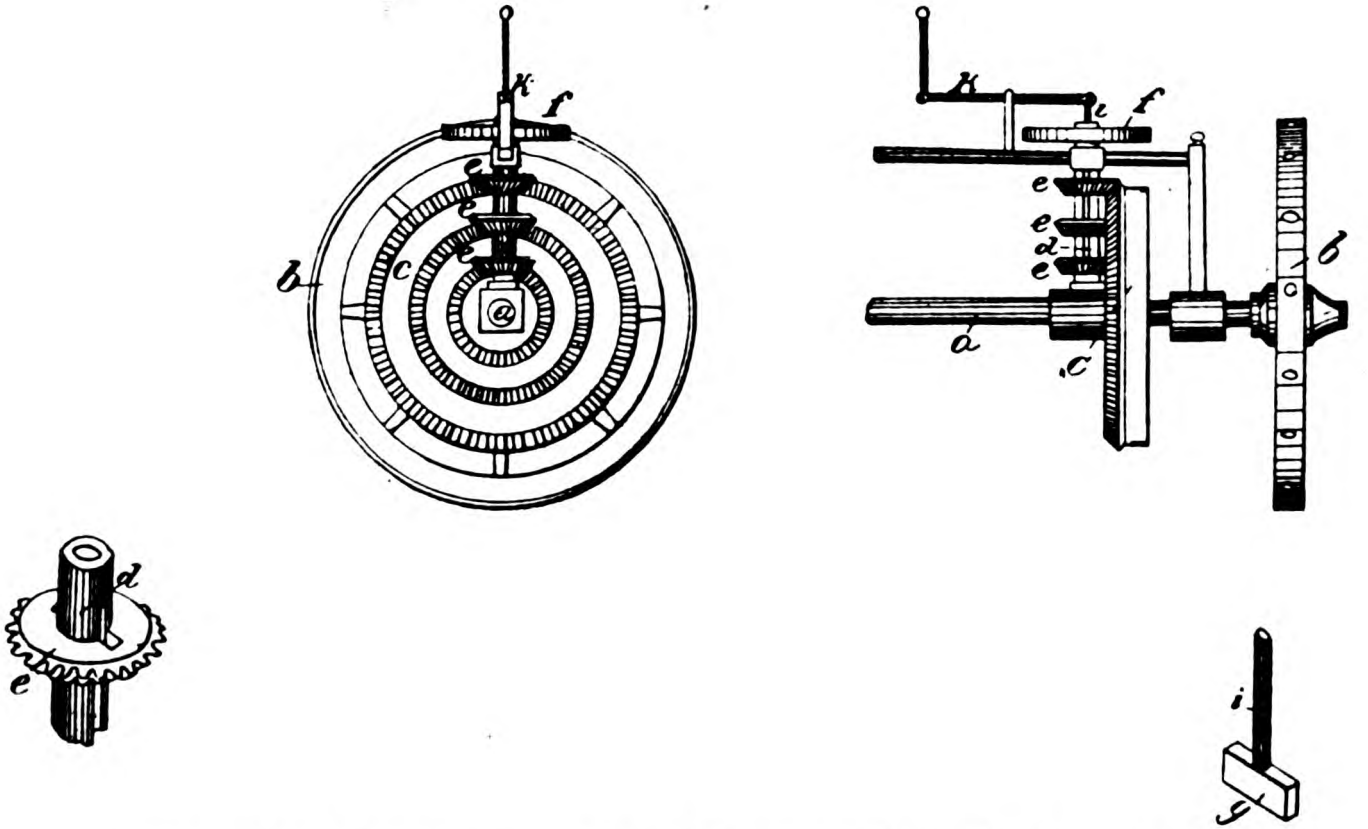
By 1855 the modernization of the plant was practically completed and a number of patents had expired, leaving any one free to duplicate the complicated machinery. Advantage was taken of the situation by John Ames of Chicopee, who went to England in 1856 and secured for the Ames Manufacturing Company of Chicopee, a contract for furnishing the Enfield Arms Works (controlled by the British government) with machinery for the manufacture of guns, of the same pattern as that used at the Springfield Armory. He also obtained a similar contract for machinery for the Birmingham Small Arms Works. He visited France and interested Napoleon in the machines and furnished Spain with a complete set.

Today, at the Smithsonian Institution in Washington, may be seen Blanchard's earlier model of the machine for producing shoe lasts. At the Armory Museum in Springfield is the actual machine that produced gun stocks more than a century ago. It is in full working order and fully capable of repeating the performance of that older age.

After refining his lathe to the satisfaction of Colonel Lee, Blanchard looked about for further occupation for his creative mind, and found it in the field of transportation.

In the early days of the nineteenth century, the Eastern states were producing such a surplus of agricultural and manufactured products that the development of a wider market was imperative. The question of adequate transportation was much in the minds of far-seeing people. Four warring camps struggled for the adoption of their pet theories; the advocates of the railroads, the canals, the steamboats, and the turnpikes, as the toll-highways were then called.

After two centuries, thanks to George Stephenson, the railroads were fast coming into their own. At some time in the half-century prior to 1650, there was built the world's first tramway; used for transporting coal from the mines of Northumberland to the river Tyne, but not until 1740 was much improvement made. Then, instead of a single large wagon, the plan of linking together a series of smaller ones was adopted; the germ of the modern railroad train. Power was supplied by horses until 1802, when Richard Trevethick designed a steam carriage that could travel five miles an hour on the rails, but it was not until 1814 that George Stephenson provided a really practical locomotive. In America the first railway was a



Thomas Blanchard's Drawing of His Three Speed Transmission Used in His Automobile in 1825

three-mile track built at Quincy, Massachusetts, in 1826 for transporting granite for building the Bunker Hill Monument. This functioned by gravity and horse power and not until 1830 was there a steam railroad in America. Far-seeing individuals, with a knowledge of what was being accomplished in England with the railway, foresaw in it an agency for the solution of American transportation problems.

In 1825, after eight long years of labor, the Erie Canal was completed, providing continuous water transport from the Great Lakes to New York. The outlook for the port of Boston was thus made quite dubious and a canal from Boston to Albany was proposed. As the impractical phases of this scheme became apparent, it was abandoned and insistent calls prevailed for a railroad over that route.

Just about that time the steamboat came into the picture, the *Clermont* ascending the Hudson from New York to Albany, in 1807. In 1815 the *Fulton* went up the Connecticut River as far as Hartford. Due to the rapids at Enfield, however, that was about the high point for such traffic and Massachusetts was thus isolated. During all this period, Western Massachusetts, with its mountain, hills and valleys, saw little hope of benefitting from any of these new devices. In its dilemma, beginning as early as 1796 and increasing rapidly with the years, there was much building of turnpikes; precursors of modern state roads. Much use was made of them, stage coach lines multiplied rapidly, but in spite of adequate relays of horses, travel over the road was uncomfortable, tedious and irksome. If the state was to hold its own in the feverish competition, it was imperative that some scheme be evolved for inducing greater use of the turnpikes.

As early as 1804, there appeared on the streets of Philadelphia, a steam wagon designed for road use. It was, however, little more than a locomotive equipped with wheels for roads rather than rails and proved merely a curiosity.

In 1825 Thomas Blanchard traversed the streets of Springfield, not only on the level Town Street, but up the steep hill to the Boston Post Road, with a steam carriage so amazingly like our first automobiles as to seem uncanny, as one looks back. A vital element that made it practical was patented and to that fact we owe much of our knowledge of the vehicle, for the Patent Office records still preserve the details of the mechanism.

As a small boy, the late Charles Wells Chapin saw this first automobile operated on the Town Street of Springfield, and many years later he described it to this writer, who was at that date another small boy. His description was so detailed as to leave in the mind of the latter, almost the impression that he in person had first-hand knowledge of that episode of one hundred twenty-four years ago.

Blanchard called his invention "a mode of regulating the speed of carriages, whereby the speed and motion may be graduated and regulated in the ascent and descent of hills, by the application of steam and other powers." Blanchard's drawings show a three-speed, bevel-gear transmission not unlike that in the modern automobile. It

had a shift lever whereby the vehicle could be put into low gear for ascending hills, while the power remained constant; a second-speed for a pick-up, and a high-speed for level roads. Nor did he end there, for his motor was provided with "a fly wheel to which a drag may be attached for the purpose of impeding and regulating the velocity in descending hills." Quite the equivalent of the modern foot-brake, one must admit. Obviously, no reverse was required, as with steam power it was perfectly feasible to reverse the engine itself.

Blanchard's patent application described his invention as follows:

"The schedule referred to in these Letters Patent and making part of the same, containing a description in the words of the said Thomas Blanchard himself of his improvement in the mode of propelling carriages on ordinary roads or railways whereby the speed and motion of carriages may be graduated and regulated in the ascent and descent of hills by the application of steam and other powers.

"This improvement consists in varying the propelling power of a carriage given by any first mover, for the purpose of more easily ascending and descending hills on common roads or railways. No particular form or description of carriage is necessary under this specification, for the improvement claimed is wholly confined to the co-operation and application of gear work to produce the desired effect, any carriage of suitable dimensions to propel the required load is sufficient.

"On one or more of the axle trees, between the wheels there must be placed a bevel gear wheel to run parallel with the carriage wheels but of less diameter, so that the periphery may not interfere with the ground. On this bevel wheel there are several circles of cogs or teeth varying in their diameter according to their place on the
..
.. of the wheel; the outer or longer circle is placed nigh the periphery
..
of said wheel whilst the smallest circle is nigh the axle tree and the intermediate ones are at proper distances between.

"No particular number of circles is claimed, but three may be taken for example. These three sets of circles or cogs are placed on the same side of the wheel. On the upper side of the axle-tree there must be placed a spindle or arbor in a perpendicular direction or at right angles with the axle-tree, and at such a distance from the circles of cogs as to admit between, three small bevel wheels, the extremities of the arbor being made to revolve freely on proper bearings. These three pinion or small wheels must be so placed on the arbor that their teeth or cogs will take hold of the teeth of the circle and turn freely on the arbor. A crank or driving wheel is made fast on the end of the arbor in order to give it motion from an engine or first mover. It is necessary to couple either of these pinion wheels to the arbor at pleasure in order to drive the wheel that contains the circle of cogs, and to give the carriage a forward motion. To effect this movement a channel or groove must be formed through the centre of the

arbor and as long as the whole length that is occupied by the pinion wheels. A wedge or jack is made to move freely in the groove, of sufficient length to project from each side of the arbor and fly into corresponding grooves formed in the inner side of the eye or box of each pinion wheel. To this wedge or jack there must be attached a rod lying lengthwise of the arbor and flying out at the one end, and made fast to a lever by which it may be raised or lowered through the whole numbers of pinion wheels. By this contrivance the steersman or director by applying his hand to the lever can place the wedge or jack in either of the pinion wheels and completely couple it to the arbor, while the other wheels are left to move freely on the arbor by the impulse of their respective circles of cogs to which they are attached, consequently the pinion wheel so coupled is the propelling power to the carriage, by these co-operating movements the speed of the carriage may be varied while the arbor and pinion wheels, which are driven by the first mover, retain at all times, the same revolution. For instance, in order to ascend a hill with the same power for a first mover that is required to propel the carriage on level ground, the steersman may by the operation of the lever, place the wedge or jack in the pinion wheel that takes hold of the largest or outer circle of teeth or cogs; this will give the carriage a slow but strong movement; on the other hand, to give the carriage a quick movement, the sliding wedge or jack is driven down to that pinion wheel that takes hold of the smallest circle of cogs on the large wheel, thus giving the carriage a rapid movement while the first mover is the same as in the former operation. A fly wheel may be placed on one end of the arbor to which a drag may be attached for the purpose of impeding and regulating the velocity in descending hills. One pinion wheel may be used to slide from one circle of cogs to the other; but I prefer one pinion to each circle of cogs. There are various kinds of gear besides bevel gear which may be used but the latter is altogether preferable. I do not claim any particular kind of gear or combinations of gear-work as used for other mechanical purposes, under this improvement, but only the application of any combination of gear work to the propelling of all kinds of carriages on common roads and railways in such manner that the propelling power & speed of the carriage may be varied at all times without delay, while the speed and power of the first mover remains the same."

Springfield, December 8th, 1825.

THOMAS BLANCHARD.

Witnesses.
JOSEPH HALE, JR.
WM. B. CALHOUN

Though there is no actual knowledge of the fact, it is apparent that unless the mechanism of the vehicle comprised some equivalent of the modern differential, to allow one rear wheel to turn faster than the other in negotiating curves, the carriage could not turn around. Of necessity, some such device must have been included.

That, however, was probably the least of Blanchard's troubles, for the principle of the differential had then been known for exactly three hundred and thirty-five years, having been designed by no less an engineer than the great Leonardo da Vinci, at the time when another great Italian, Christopher Columbus was discovering America. As described by Antonina Vallentin, Leonardo's device consisted of "two horizontal cogwheels connected together by a toothed crown wheel, thus giving a compensated drive, a mechanism known in modern motoring language as a differential gear, and aimed at securing a differentiated revolution for the wheels at curves."

At Milan, Italy, shortly before World War II, there was shown an amazing exhibit of Leonardo's versatility. For more than a year, a score of experts pored over his note books and drawings and at a cost of over $250,000 produced models of more than two hundred of his inventions. There was shown, not only the differential, but a turnspit driven by the draft of the chimney, a machine for cutting files, an olive oil press such as is still used in Italy, a flying machine whose wings were powered by the operator and many another contrivance so modern as to seem almost unbelievable.

Though Blanchard's demonstration of his carriage was apparently successful, probably popular prejudice had much to do with discouraging its further development. Though the turnpikes of this period were far superior to the country roads of a prior era yet they were far from adequate. A journey on a coach of that day was a hazardous undertaking. The high, unwieldy vehicles overturned easily. Stage robberies were frequent. Accidents on the highways were far more common than they were on the railways. The frequency with which steamboat boilers had exploded, with appalling loss of life, made one pause at the thought of sitting in close proximity to such a dangerous contrivance. Wood was then the only practical fuel and sufficient could be carried for but a short trip. So the idea remained quiescent until kerosene became available. Then came the "steamer", driven by our fathers. With the development of gasoline came the present automobile, but two vital elements, the clutch and the differential, remain much as designed by Leonardo and Blanchard, so long ago.

There would seem to be a further reason for the dropping of the idea by Blanchard. Steamboats were fast growing in popular favor as safety-valves were provided for the boilers. He set his inventive mind to the task of contriving a craft that could defy the rapids above Hartford and so bring the steamboat to his adopted hometown of Springfield. This end he finally achieved and on March 25, 1831, he was granted a patent for "a steamboat for the passing of rapids." This stern-wheel boat was a great success and was the progenitor of the stern-wheelers which later became so much a part of river traffic in the West, especially on the Mississippi.

The most westerly building on the Armory Grounds is that known as the Main Arsenal, a three story storehouse, copied to a considerable

extent from the East India House in London, England. The building is two hundred feet long and seventy feet wide, designed for the storage of 300,000 arms; 100,000 on each floor and long believed to be the subject of Longfellow's words,—"This is the Arsenal. From floor to ceiling, like a huge organ, rise the burnished arms."

Such belief, however, disregards known facts and documentary evidence. Actually, the Main Arsenal building was not in existence in 1843 when Longfellow visited Springfield on the occasion which inspired that well-known peace poem. The building in which the poet really saw the rifles stacked from floor to ceiling was the Middle Arsenal, still standing, on the State Street side, with a flag pole capped by an eagle weathervane, cut in silhouette. A drawing on a map of 1830, in the State Archives in Boston, portrayed the scene as it then appeared, when viewed from State Street, and looking between the Middle Arsenal on the left and the East Arsenal on the right, with the Administration Building in the distance.

In the period before the Main Arsenal was built, there were three separate arsenal buildings along the State Street side; the West, the Middle and the East arsenals. The Administration Building, facing Federal Street, was then also one of a row of detached buildings which have since been connected to become the long building now standing there. The old East Arsenal has lost its separate identity by becoming an ell to this long building.

The row of buildings of which the Middle Arsenal was one, was the child of Col. Roswell Lee, who, after the disastrous Armory fire of 1824, had recommended removing the Armory establishment to the Chicopee River or concentrating it around Watershops Pond, or constructing the arsenal buildings on the present Armory tract so separated that they would not constitute a great fire hazard. The third of these alternatives having been approved by the War Department, the plan was accepted about 1830, and the Middle Arsenal was built at that time.

But the facts that reveal the Middle Arsenal as the inspiration for that poem are found in official documents which show that it was in the early 1840s that the Middle Arsenal was first equipped with the racks which suggested the organ pipes of the poem, and that by the time Longfellow came to the Middle Arsenal, it was filled with shining rifles. In the *Life of Longfellow*, edited by Samuel Longfellow, it is related that "his wife pleased her husband by remarking 'how like an organ looked the ranged and shining gun barrels which covered the walls from floor to ceiling', and suggesting what mournful music death would bring from them."

The social relations between the town folk and the military personnel at the Armory were most cordial, there being none of that antagonism such as so often exists between town and gown in college communities. Officers' daughters were eagerly sought as dancing partners, while the younger officers were equally welcome in the inner circles of the town. To the socially qualified, the Armory offered well-kept tennis courts and tennis partners. The first floor of the

Middle Arsenal was used for roller skating and hockey games. In winter, the parade ground was flooded and rather freely used for skating by the general public.

While today a mere handful of soldiers are quartered at the post, in the "gay nineties" a full company was required to cut grass, gather leaves, maintain a vegetable garden abutting on Lincoln Street, run errands for the commandant's wife, and clear walks from snow.

Camp Banks, Springfield, 1862

Their military duties were most limited. The gate at the State and Byers Street corner was the social entrance while that on Federal Street gave entree to the workmen. Day and night, both these entrances were guarded by armed sentries, pacing to and fro. As a sentry's trick ended and his duties were taken over by his relief, the exchange of countersigns and passwords was a rite of never-failing interest.

In the center of the parade ground was a flag pole flanked by a saluting cannon with which a squad of soldiers saluted the sunrise each day. Then the flag was run up, to remain until sunset when the ceremony was repeated, in reverse order.

With the closing of the Civil War it was fondly dreamed that all wars were at an end, as far as America was concerned and the ensuing half-century at the Armory was made up of rather carefree days. A bit of flurry was brought on by the Spanish-American War but that was of short duration. Casual observers noticed that the

entrance gates were kept closed and that the entire fence was patrolled, but that too was for a brief period.

Some forty years ago a dance was held on the Armory grounds which surpassed any former effort. It is an axiom in military circles that an officer is perforce a gentleman. West Point is expected to provide that combination from some rather raw material. To add visibility to theory, the entire cadet corps was transferred to Springfield for one night to give it a first-hand example of how the other half lived. To the dance on the Armory grounds that evening, came a sufficient number of Springfield's most charming daughters to provide a partner for each cadet. Long and serious thought was given to compiling the invitation list. Individuals were screened and investigated that none should be admitted to whom a breath of scandal could be attached. Apparently success was achieved by the sponsors for there is no record of a single cadet led astray on that occasion.

More recently, the greatest activitity which the public encountered on the State Street side of the grounds was when the high school girls went over into the Armory grounds in their "gym" suits, which was a gay spectacle. Entrance was had from the gate on State Street, toward the top of the hill, to which some of the teachers had keys.

In February, 1933, expressions of nostalgic regret were evoked by announcement of the intention to abandon the sunrise and sunset guns at the Armory, and the firing of salutes for dignitaries entitled to them when visiting the city. Since perhaps beyond the memory of any person now living, the Armory gun saluted the sun at rising and at its going down. As the sun dipped from sight, there came the echoing bark of the cannon, the flag fluttered earthward to be deftly caught and reverently held by the color sergeant that its bright folds might not be besmirched by contact with the ground. It was a colorful ceremony, calculated to bring a lump to the throat. No record exists to show when the custom was initiated at the Armory, but it is logical to assume that it was when the establishment first became a military post. It will be remembered that for many years after its establishment in 1794, the Armory was under civilian management. It was not until 1841 that the ordnance department of the army was put in control and Col. James W. Ripley became the first commandant.

That put an end to an easy-going regime in which discipline of any kind had been conspiciously absent, but the militarizing of the establishment would most naturally have included ways and customs so common to military establishments throughout the world, such as sunrise and sunset guns and other salutes.

An Early Tourist

By Florence Thompson Howe

From the very beginning America was accounted a land of opportunity and riches,—an Eldorado where the very streets were paved with gold. Eventually it became apparent that though gold was not to be had for the mere asking, yet shrewd bankers and merchants

found that capital wisely invested in the natural resources of the New World would produce greater returns that was to be commonly had elsewhere. However, through the long years of the Revolution, stoppages and embargoes brought about conditions that resulted in scant returns from investments in the colonies. American debtors took advantage of the situation to withhold payment of perfectly proper account for merchandise, well knowing that while the war continued, creditors could not proceed against them through the courts. With the coming of peace, those European bankers and merchants studied the situation in an effort to find a way of salvaging as much as possible from a bad predicament. Civil servants, crown officials and ostracized Tories, returning to England, carried with them credible tales of opportunities in America. As a result, large numbers of investors came to the new republic of the United States, some acting in their own behalf while others came as agents for investing groups.

Being familiar with the filthy slum districts of London and the numberless paupers there and with the assurance that in New England there were no needy people, because a good living could be had with such little effort, they were keenly interested in the opportunities offered. A typical comment was that of a French emissary, the Marquis de Barbe-Marbois.* While en route from Boston to Baltimore via Springfield in 1779, he spent a night at Brookfield, where he observed that "everywhere there is an air of comfort and even of abundance; not a single beggar, not a man whose unfortunate appearance troubles the pleasure that we have in contemplating the abiding place of happiness and liberty. One day, when we had a superfluity of provisions we said to our host, 'Give these to the poor'. He could hardly understand what we meant, and no poor were to be found."

In the early autumn of 1795, Samuel Watkinson, a young Englishman who had come with father and brothers to investigate trade prospects in the Connecticut Valley, visited Springfield and recorded the visit in his *Journal,* together with some notes about the town, its hospitality and the townspeople he met. His comments about Main Street personalities, pieced out with recorded facts about them, afford an amusing re-creation of Springfield's front-family facade a decade after the Revolution.

The town wasn't much of a metropolis in those days. The United States Census for 1790 lists 228 houses, 266 families and a total of 1,574 population for Springfield. West Springfield was much more important; 2,204 people in West Springfield. It was only five years after these figures were compiled,—on July 6th, 1795, to be exact,—that young Samuel Watkinson, Jr., landed at Marblehead. He arrived in Boston on the twenty-fourth. He appears to have had a good many letters of introduction. He mentions William Phillips, Parkman, R. G., Amory, John Mason and William Coolidge. Mr. Coolidge gave him letters to Eleazer Williams and Zebina Stebbins, merchant of Springfield.

* *The Atlantic Monthly,* August, 1928.

What better substitute for the Chamber of Commerce than the persuasive young Eleazer Williams (later to become the portly and magnanimous host of Eleazer Williams' Inn, *nee* Parsons Tavern, and one of the donors of Court Square) and his enterprising colleague, Zebina Stebbins storekeeper extraordinary?

Mr. Watkinson drove up from Hartford on September 7, 1795. He came by the mail stage in company with Mr. Sullivan and Mr. George Blake, both Boston lawyers. At Suffield, he says he saw, "'en passant,' Oliver Phelps, Gentleman and Mr. Granger, lawyer." (Evidently they made a distinction in those days.) He mentions Mr. Kirkland, also a lawyer of Boston. Mr. McKnight of Hartford gave him a letter to Mr. Dan'l Lumbard of Springfield, who, says Mr. Watkinson, "treated me with the greatest civility and hospitality." "At Mr. Lumbard's," he goes on to say, "I saw Mrs. Lumbard and several of their children; Mrs. Putten of Hartford and Miss Eunice Burt, sisters to Mrs. Lumbard. In the evening Mrs. Lumbard and Mrs. Putten drank tea at Mr. and Mrs. Sargeant's (who intend to go to Hartford to live) where we went afterwards. Mr. Eleazer Williams and I took our tea in the Meantime at Mr. Lumbard's."

At the time of his visit to Springfield, Mr. Watkinson was a young man twenty-two years of age, with capital to invest. Eleazer Williams was but twenty-four, and must have welcomed the thought of so congenial a contemporary in the town. One can well imagine that while the older members of the group "drank tea at Mr. and Mrs. Sargeant's," these two may have added a drop of Jamaica rum to theirs, as they lingered on together "at Mr. Lumbard's."

Mr. Lombard kept a store in a wooden building which stood on the corner of Main and Elm streets, across Elm Street from the Parsons Tavern, which Mr. Watkinson mentions in his *Journal.* Daniel Lombard was a comparatively young man at the time of Mr. Watkinson's visit; only thirty-one. The year before (1794), he had been commissioned by Gov. Samuel Adams, quartermaster First Regiment, First Brigade, Fourth Division, Massachusetts Volunteer Militia. He had married Sylvia Burt of Longmeadow, whose sister Eunice is mentioned in the traveler's journal. Daniel Lombard had already distinguished himself in the community, when in 1787 he had been active on the side of the government in quelling Shays' Rebellion. In 1806, during the second term of Jefferson, he was appointed postmaster of Springfield, and held the office through the administrations of Madison, Monroe and John Quincy Adams, until June, 1829, a continuous service of twenty-three years. He seems to have taken a great interest in the young traveler, showing him houses and "situations for buildings."

"In the afternoon," says Mr. Watkinson, "I went to Mr. Zebina Stebbins who showed me his duck manufactury which he says pays him 25 per cent for money. 1,700 Pounds. He has a mechanical genius and often speaks of it, has a brother in partnership with him in a store; he is rather an enthusiast for manufacturing and was extremely

desirous to have me establish a woolen manufactury, saying that Springfield was a good situation; he could get me as many hands as I could wish to employ; there was a great consumption of stuff goods; he would learn the work people to spin and weave and would ensure the trade as long as I wished."

Such was the coöperation held out to encourage the early American tourist, in the days before there was a Chamber of Commerce to contact the inquiring capitalist. Small wonder that Springfield grew and prospered! Zebina Stebbins, whose "Duck Manufactury" is indicated on the map of "Springfield in 1794," evidently took over the responsibility of acquainting Mr. Watkinson with the town's commercial possibilities, as Daniel Lombard had sponsored him socially.

It is amusing and interesting to note that the little group of Springfield men whom Watkinson met and mentions in his diary, were apparently the élite of the village. Or at least the local financial men. "Mr. Lumbards is a dry goods store," the *Journal* says. "Mr. Stebbins the same, and a duck manufactury; Mr. E. Williams, earthen and glass ware and dry goods and W. India Goods; Mr. Howard, clergyman; Col. Williams, gentleman." The Mr. and Mrs. Sargeant mentioned were Jacob Sargeant and his wife, who afterwards went to Hartford, but whose younger brother Thomas carried on the goldsmithing and clock making business which Jacob had established. At the time of the visit, Jacob Sargeant's store must have been on the west side of Main, south of Elm Street, for the records say that in 1787 he came up from Mansfield and bought "a parcel of land," from William Colton, the "northerly moiety of the Gaol (Jail) lot." This "parcel" is also indicated as the "Gaol" on the (1794) map. Twenty pounds is the price of the purchase as recorded in the Hampden County Registry of Deeds.

Parsons' Tavern (Zenas Parsons, landlord) is mentioned in the *Journal,* although it is not clear whether Mr. Watkinson stopped there, or whether he was entertained in the Lombard home and merely visited the tavern. He speaks of seeing "Mr. Kinsley, the inventor of the machine for making bricks at Parson's." There is no punctuation, but presumably it was "at Parson's" that the journalist met Mr. Kinsley. He also lists the name of Alexander Bliss, the tanner, Colonel Orr and Captain Eton of Brimfield (doubtless encountered at the tavern) and Captain Bryant of Springfield.

Captain Bryant is mentioned in *The Genesis of The Springfield Armory* (by Harry Andrew Wright) as "Captain John Bryant of Boston, Captain of Artillery Artificers" under the command of Capt. Benjamin Frothingham. Bryant's testimony is recorded in an examination of witnesses by the Council of the State, held in Springfield.

Colonel Williams, listed in Mr. Watkinson's *Journal* as "Col. Williams Gent.," must have been the Col. Joseph Williams who was military storekeeper at the arsenal, and lived on the Colton place, State Street, which Dr. Charles Pynchon secured in 1781 after a lawsuit with Colton. Williams married Pynchon's daughter, and thus

secured the property, which was subsequently bought by Jonathan Dwight, Jr. Colonel Williams was probably the gentleman mentioned in Washington's diary, when, six years earlier, the first President had visited Springfield and made in his journal the following entry:

——"reached Springfield at four o'clock, and while dinner was getting, examined the Continental Stores at this place. A Col. Worthington, Col. Williams, Adjutant General of the State of Massachusetts, Gen. Shepherd, Mr. Lyman and many other gentlemen sat an hour with me in the evening at Parson's Tavern, where I lodged, and which is a good house."

Mrs. Williams's sister was the wife of Congressman Lyman, the "Mr. Lyman" Washington mentions. It would appear that Mr. Watkinson had crashed the inner circle, on the occasion of his Springfield sojourn. All of the people he mentions, Zebina Stebbins, Jacob Sargeant, Col. Jos. Williams, Alexander Bliss, Moses Church, Zenas Parsons and Daniel Lombard, Jr., are listed among those taxed for a fall-back chaise. According to Green's *History of Springfield,* a fall-back chaise was taxed 10 shillings in 1791; a stand-up chaise 6 shillings, and a sulky or riding chair, 4 shillings. There is something impressive in the very sound of that word, "fall-back chaise." It has the odor of grandeur about it; obviously Mr. Watkinson's Springfield friends were of Rolls-Royce caliber.

Real estate was on the up and up, in those days. "There is not a house to let in the town that I could hear of," Mr. Watkinson writes, "Mr. Lumbard shewed me a new house belonging to Diamond Colton which is for sale. Stands 350 pounds. It is in a good situation with room in front to build a store by the side; has four rooms on a floor with a cellar and a garden. It is without paint or papers but is said to be very cheap."

Three hundred and fifty pounds sterling would be something over $1,700 as we count it today; which does not seem particularly "cheap" for a simple house "without paint or papers"; on a muddy street in a raw, new village one would not expect values to be so high. However, Mr. Watkinson seems to have looked favorably on the location. "There are in Springfield many good situations for buildings." he says. "Mr. L. shewed me several. Springfield is a pleasant town. There are no wholesale stores. They often have their English goods by land, being much more expeditious, and not much more expensive. They (the storekeepers) take in the Grain, Beef, Pork, Cheese, etc., of the Farmer in payment for goods, which they send to Boston, N. York, or the West Indies on their acct and very seldom sell to merchants in Hartford or Middletown etc."

It would be pleasant to think that the eager interest and enthusiasm with which the early American Chamber of Commerce greeted the early American tourist interested in capital investments, bore fruit. But alas, the young visitor of such high hopes, and those who extended their hospitality, were not to realize their ambitions. For Samuel Watkinson, Jr., (born at Lavenham, England, Sept. 1, 1773)

died at New York, Sept. 6, 1798, aged twenty-five years. His death occurred three years to the day after his visit to Springfield. His father, however, and most of his family eventually settled in Hartford, one of the firm names being D. & W. Watkinson.

Arrived at Hartford, William Watkinson (possibly the young traveler's uncle) writes:

"I have connected myself in Business in this City with my Brother David under the firm of D. & W. Watkinson, and am quite well pleased with my situation, finding a much greater field for commerce than I had any idea of. Our principal business at present consists in trading to the West Indies, and in supplying the storekeepers in different parts of the state and up the Connecticut River with West Indies Goods, and Groceries in general, and our run of Business has been such as to call one or other of us continually to New York or Boston to purchase goods for the supply of the Store here. But our Intention is to increase our Navigation and to direct it more to the European Trade, one branch of which will be the shipping of Flaxseed (which is one of our staple Commodities) to Ireland, and we are about erecting Works for the purpose of cleaning the seed."

1838

A Distinguished Naturalist

By Dorothy King

On the fifteenth day of July, in 1636, a little band of Englishmen gathered by the banks of the Agawam River, at what was destined to become Springfield in Massachusetts. They met, to conclude with the natives, long drawn out negotiations for the land required for their projected settlement. With the aid of an Indian interpreter, Ahaughton, brought on from Boston by their leader, William Pynchon, their efforts that day were successful. To the graphic symbols affixed by the Indians to the formal agreement, John Allen was one of six white men who signed their names as witnesses.

This John Allen was a son of Matthew Allen, who with his brother Samuel, came to Cambridge, Massachusetts, from Braintree, England, about 1630. John was born in England, but his birthday is unknown, though he must have been a young man in 1636, for on November 19, 1651, he married William Pynchon's granddaughter Ann Smith, who could not have been born before 1631. From other known facts it seems safe to assume that John was born about 1620.

Being unimpressed with the meager opportunities at Springfield, young John did not remain, but removed almost immediately to Connecticut, where he became a man of prominence. In 1640 both his father and his uncle, Samuel Allen, joined him there and the family became the progenitors of a large race.

Samuel Allen, born at Braintree, England, in 1588, had a son John who was killed by the Indians at the Bloody Brook Massacre,

September 18, 1675, leaving a son Samuel, born February 5, 1673, who died in 1735. This Samuel had a son Joseph, who was born at Enfield, Connecticut, July 30, 1704, and died at East Windsor, June 11, 1777. He had a son Hezekiah, born at East Windsor, October 8, 1739, who died June 14, 1807.

At East Windsor, on June 28, 1781, there was born to Hezekiah, the first Joel Allen, he being one of five children,—Abigail, Mary, Hezekiah, Joel and Eunice. Joel married Lydia Butler and died in Springfield, August 12, 1819.

Joel was not only a younger son, but his elder brother was the father's namesake and in accordance with the custom of the times, the eldest son was destined to inherit the family acres. By 1807 the father was approaching the Biblical three-score years and ten, in those days, the age of decrepitude. Apparently sensing the changes to come, nearly three months before his father's death, Joel, at the age of twenty-six, went to Springfield, and on March 24, 1807, he bought of Joseph Lord, fifty-two acres of land "near Cranberry Pond by a path leading to Sixteen Acre mill." In his deed he is described as "of East Windsor." On September tenth of that same year he bought of Nathan Harris, ninety-seven acres "east of Small Brook." In that deed he is described as "of Springfield." On June 6, 1809, he again bought from Nathan Harris this time "six acres on Necessity Hill", and two days later he bought of E. Wolcott, sixteen acres "west of Necessity Hill on the path to Sixteen Acre mill and adjoining his own land."

Necessity Hill, the highest land in Springfield, is now known as Markham Hill.

This one hundred and seventy-one acres bought by Joel Allen was but a part of his purchases, for continuously, up to the time of his death in 1819, he added to his holdings, gradually working westward toward the town, along the line of what is now Allen Street. Near the westerly end of this tract he eventually built his home.

Without that most accurate map of Springfield, made by Joseph Ashley, in 1827, it would be impossible to identify that home today. On the map, the present Allen Street is designated as "the road from Springfield to Connecticut line by Upper Water Shops." The course of the road at that point is given as "to a stone set in the ground, two and a half rods south of the south west corner of the Joel Allen house." The house itself is designated as "Widow Allen's house". The course of the road remains the same and the stone is still there, as is the house, which is readily identified as the one on the northerly side of Allen Street just east of its junction with Sumner Avenue.

Here Joel Allen had a son Joel Allen, 2d, born December 11, 1810, the eldest of four brothers. On September 6, 1837, Joel 2d, married Harriet Trumbull, and died January 9, 1886. His wife died June 20, 1892.

The elder Joel died when Joel the younger was but nine years old, and even after his marriage the son continued in the same house.

Here was born, July 19, 1838, his eldest child, Joseph Asaph Allen, who married October 6, 1874, Mary Manning Cleveland, and to them was born at Cambridge, June 25, 1878, their only child Cleveland. The mother died April 17, 1879, and on April 27, 1886, Joel Asaph Allen married Susan A. Taft. He died August 29, 1921, at the age of eighty-three, after a life of public service as one of the most distinguished naturalists of his time.

In his autobiography which appeared in 1916, Mr. Allen the naturalist, describes the family home "as a large two story square house, at the time innocent of paint and unshaded by trees." He says that one of the pleasantest memories of his younger days is that of helping his father plant the row of maples and elms which have long been a distinguishing feature of Allen Street.

He early showed an interest in natural history and while his father had little sympathy with these tastes his mother was much interested and often used her influence in his favor.

"Despite hard work and long hours," Mr. Allen wrote in his autobiography "the farm proved attractive and satisfying for a time, but at about the age of fourteen the love inspired by this free contact with natural surroundings developed a desire to know more of the animal and plant life, the soil and the rocks, and the ever-changing phenomena of sky and air than could be gained merely by association."

As a boy Mr. Allen collected and mounted some three hundred birds representing nearly one hundred species and "such native mammals as I could find near my home, and I preserved in jars of alcohol specimens of all the reptiles, amphibians and fishes and such mollusks as were available were also gathered and several hundred insects." His parents provided him with a room which he used as a small museum and in addition to these specimens he also had an extensive collection of local minerals and rocks.

"The whole was amateurish in the extreme," Mr. Allen wrote "and represented merely a superficial acquaintance with a wide range of subjects, but enough to add immensely to the pleasure of living, giving, as it did, a sense of being in touch with the plant and animal life and the geographical features of my immediate environment. My notebooks contained pages of descriptions of unusual atmospheric phenomena, from the prismatic tints of fleecy clouds, floating past the midday suns, halos, unusual storm conditions, auroral displays, and the August and November shooting star periods, to the varied forms of the snow crystals of a winter storm—things for the most part unobserved by my friends and neighbors, and which hence gave them no added joy to living.

"It is needless to say that my interest in every day practical affairs was limited to a conscientious and cheerful discharge of the obligations natural to my position as a helper to my father in the routine of farm work. Every spare moment of the day when in the

house was spent in my room poring over books of specimens or jotting down things seen out of doors in the corn or hay field. These constant disappearances when off duty were naturally a disappointment to my father, who could not appreciate my absorption in such unpractical affairs. To the oft-made inquiry of my father, 'Where's Asaph?' was mother's gentle response 'Upstairs' and the contemptuous paternal rejoinder 'Upstairs, he's always upstairs.' Although unappreciative of his son's 'foolish notions' he was not harsh or unkind, as an agreement, lasting for several seasons, granting one day a week for the prosecution of my hobbies is ample evidence. For these foibles my mother had always a degree of sympathy, which increased as years passed to active influence in their behalf."

After completing his studies at the neighboring school, a building of "the conventional red type located on the crest of a hill," about a mile distant from his home, Mr. Allen studied for several years at Wilbraham Academy. His expenses there were a serious drain on his father's slender resources and although his little museum was so "dear" to him that it did not seem as if he could part with it under any circumstances, Mr. Allen finally sold it to Wilbraham Academy and had the money applied to his school expenses. He said that he would rather do this than impose further financial hardship on his father.

He showed such brilliance at the academy that arrangements were made to pay him the balance due him for his museum in cash and to have him become a student under Agassiz at the Lawrence Scientific School in Cambridge. He did so and was making excellent progress there when a serious attack of measles weakened his eyes and impaired his health so that he had to return to his home here for several months. He returned to Cambridge and studied ornithology for several years under Agassiz. During his stay here he collected about four hundred specimens of animals and birds.

During the winter of 1865-66, Mr. Allen went to Brazil with Professor Agassiz on a collecting trip sponsored by Nathaniel Thayer, a friend of Agassiz. They had many thrilling adventures not the least of which were encountered during the trip home in a sailing vessel during which the ocean displayed "angry paroxysms." Next came research at Sodus Bay on Lake Ontario and then appointment as an assistant in ornithology at the Agassiz Museum, a post which Mr. Allen held for eighteen years.

During this time he made numerous study trips including one to the Great Plains and Rocky Mountains in 1871 and 1872, during which he collected valuable material concerning the buffalo.

"The Rocky Mountain experience was one long to be remembered," he wrote, "as we took no camp outfit but our blankets, a little flour and canned fruits, depending naturally upon buffalo meat for our main subsistence, buffalo chips supplying us with fuel. Our blankets were our only shelter at night, and our wagon was our own

screen from the hot midday sun. We saw no Indians but the landscape was everywhere dotted with small bands of buffalos, which were so numerous that on one occasion they darkened the plains to the west of us as far as the eye could reach."

In 1873 Mr. Allen led a party to the Yellowstone and during that expedition the party was several times attacked by Indians. General Custer came to their rescue and dispersed the Indians. Three years later Custer and his entire command were massacred in a fight with the same band of Sioux Indians that had attacked the expedition.

In 1885 Mr. Allen was named curator of the Department of Ornithology and Mammalogy at the American Museum of Natural History in New York, a post which he held until his death in 1921. Honors came to him from scientific societies and colleges throughout the country, one of the most prized of which was a Doctor of Philosophy from Indiana University in 1886, when David Starr Jordan was its head.

Mr. Allen was a modest and retiring man and was always exceedingly shy. Because of this he avoided public appearances and says that his attempts to read papers before scientific societies were often failures, not so much because of lack of knowledge of the subject as because of embarrassment. In closing his autobiography he pays high tribute to Louis Agassiz for his inspiration and influence as a teacher.

When the Allen Bird Club was formed thirty-six years ago, it was suggested that it be named the Morris Bird Club in honor of the late Robert O. Morris. While appreciative of the tribute Mr. Morris said he felt that it would be more fitting if it were named for Mr. Allen, in recognition of his distinguished record as a naturalist. The suggestion was readily accepted and the club has carried on during the years since in a spirit worthy of the man whose name it bears.

In 1938, in connection with modest exercises commemorating the hundredth anniversary of his birth, examination of the specimens which Dr. Allen had sold to Wilbraham Academy so long ago revealed the fact that the specimens included a number of skins of the extinct and almost priceless passenger pigeon.

A Balloon Ascension

By Dorothy King

September 30, 1852 was a red letter day in Springfield annals, for on that day Monsieur Petin made a balloon ascension, the first of the season, as the main attraction of the annual fair of the Hampden Agricultural Society. A tremendous crowd gathered for the affair, the *Republican* of October 1, 1852, asserting that it "may well be doubted if ever such a concourse of people had poured into Springfield" as came on that day.

A horse show, cattle and fowl exhibits were held as part of the fair and a midday dinner was served at the Cooley House. The

Republican's report of the fair gave high praise to the horse show, saying that a better one had not been seen in any locality and that the dinner was not a "cold affair, but a regular hot dinner and one of the best dinners served on a public occasion that we have set down to in many a day."

There were speakers after dinner and during the last speech, according to the *Republican's* account, "there was a general examination of watches and people began to feel feverish," because of their great excitement over the balloon ascension, which was scheduled for 3:30. The minute the speech ended, says the report, there was "a rush from the hall without regard to order or civility."

At the Spring Street grounds where the ascension took place, the Springfield Brass Band alternated with the Springfield Cornet Band in playing during the wait. George Wells of Greenfield, and H. N. Pomeroy of Springfield had planned to be passengers in the balloon, but there was not enough gas to raise these two, together with M. Petin and an employe, who accompanied him on his flights.

"So the two amateur voyagers were obliged to forego the consummation of enterprise," said the *Republican's* report. "At 15 minutes past 4 the balloon swung loose, only slightly held to the earth by ropes. M. Petin had shaken hands with a number of friends who crowded around the car as well as the gentleman, a Frenchman who alone shared the prospect of ascension with him. It was found necessary to throw overboard nearly all the ballast and then the word was given. A cannon on the Hill announced that he had started. The two flags that hung from the side cordage gradually unfolded themselves in the air,—up—up—for a few seconds and then a cheer burst from the crowd such as a man hears but a few times in his lifetime. M. Petin stood in the car swinging his hat and receiving responses that might have reached the ear and eye at a great distance. At the moment the sea of upturned faces was a sight to behold, more eyes being turned heavenward than are often seen in these days of low morality."

The balloon soared high and floated far away. The *Republican* urged its readers to have no fear concerning M. Petin, asserting that he "would turn up in good time." He did, landing at Broad Brook, Connecticut, near Windsor at six that night. He returned to Springfield, October second, being welcomed at the station by his wife, "with French cordiality" according to the report.

In giving an account of his ascent he said that he had an experience during the trip which might have an important bearing on future aerial navigation. He said:

"Laying hold of a large American flag which was suspended from one side of the balloon as the latter turned like a wave in consequence, I directed Gustave to do the same with a similar French flag on the opposite side. The balloon then resumed its former position, the two flags making the balloon a sort of two sailed vessel,

effecting the first experiment in what may become, in the future, aerial navigation."

The Springfield Gas Light Company came in for great praise for manufacturing 50,000 feet of gas besides supplying its regular customers on the day of the balloon ascension. M. Petin had equipment which manufactured some of the gas but had to call on the gas company for the bulk of it.

In the possession of Harry Andrew Wright, author-editor of this work and local historian, is the following account of the balloon ascension written by a Chicopee school boy:

"On Tues., Sept. 30, I started for Springfield in the half past twelve train to witness the proposed ascension of Monsieur Petin with his balloon. Immediately on arriving at Springfield Depot, I started with one of my schoolmates for the place from which the balloon was to ascend. This was a vacant lot between Spring St. and the Armory grounds, which was inclosed by a high board fence. The balloon, which was in one corner of the lot, was surrounded by a still higher fence. The balloon was a large bag of silk of an oval shape inclosed by a netting of cords or small ropes. During the process of filling with gas, it was retained in its place by cords connected with the netting, fastened to bags of sand, and by a rope extending over the top. After taking a peep at it through the cracks in the fence we strolled around the city for some time, after which, we returned to the place of ascension. The appointed time for starting was 3½ o'clock. At this time the assembled multitude were all expectation waiting anxiously for it to commence its aerial flight. After some time it was led out of the small inclosure and I went into the lot to see it ascend. In the place of the sandbags there were two men at each rope. A small boat was attached to the underside of the balloon for the aeronauts to ride in. The balloon was then drawn to the opposite end of the lot. A cord connecting with a valve in the bottom of the balloon extended downward to the boat to enable the men to descend when they wished by releasing some of the gas.

"After making all necessary preparations M. Petin and his attendant got into the boat. The men who held the ropes were mostly connected with the Eagle Fire Company of Springfield, and at the command of their foreman would let out a little at a time, until about 15 minutes past 4, on the discharge of a cannon, they released entirely their hold of the ropes, and the balloon arose in the air, amid the waving of hats, and the cheers of the spectators.

"As it arose M. Petin threw out flowers from the boat which many of those below strove to obtain. Seeing one falling at some distance from the crowd, I placed myself under it and a number of others started for it at the same time. As it neared the ground I jumped for it and caught hold of it, but the rest sprang at the same time, and after the 'noise and confusion' had subsided I found

myself comfortably lying on the ground without the prize. As the balloon arose it was wafted over the Armory grounds, and as more flowers were thrown out I thought that I would climb the fence to obtain some of them. After some trouble I mounted the fence when I was politely requested by one of Uncle Sam's employees to get down on the same side from which I started. He was even so polite as to bow to the earth, and I believe that if I had staid on the fence, he would have sent me some geological specimens in the shape of small stones, but as I was in something of a hurry about that time I jumped off the fence as soon as I could, consoling myself like the fox in the fable, with the reflection that the flowers were not worth the trouble of obtaining them. After attaining considerable height, M. Petin let fall a small parachute. Soon after, the balloon struck a different current of air, and took a southerly direction. After looking at it as long as I wished I went to the fair, but I lack space for describing it here. I returned to this village in the 7 o'clock train, which was so crowded that I was obliged to stand. I think that the city air of Springfield did not agree with me for I arrived at home with a violent headache, besides being very tired."

An idea of the elaborateness of the fair is gained from the following advertisement which appeared in the *Republican* a few days prior to its opening. It is interesting to note that the cattle show was held at Main and Bridge streets:

"Cattle Show and Fair
An exhibition of
Mechanic Arts at
Springfield, Wednesday and Thursday
September 29 and 30, 1852

"A magnificent tent will be spread on the Pynchon lot (corner of Main and Pynchon streets) and will be occupied with Mechanic Arts, Agricultural Implements, Domestic Manufactures, Vegetables, Fruits, Flowers, Stoves, Carriages, Fancy Work Etc. All articles intended for the Exhibition must be sent in on Tuesday, if possible or before 9 o'clock Wednesday morning. N. B. The doors will be open to the public at 11 o'clock A.M. Wednesday Morning.

"The show of Cattle will take place on Wednesday morning at 10 o'clock on the lot at the corner of Bridge and Main street."

1889—The Night Lunch-Cart

In Springfield, "the shades of night were falling fast" late one afternoon in 1889, and with the gathering darkness an odd contraption appeared on the streets as "Sam" Jones set out to revolutionize the eating customs of a nation.

Samuel Messer Jones, pioneer lunch-cart manufacturer and operator, member of the Springfield City Council and for many years prominent in the Socialist Party, was born May 3, 1854, in Madison,

Maine, and was graduated from the University of Maine in 1876. After graduation he learned the machinist's trade and for six years was employed by the Corliss Steam Engine Works at Providence, but removed to Worcester in 1884, to experiment with a night lunch-cart which he had conceived.

His original thought was of an enclosed wagon, from which could be dispensed coffee, brewed over an oil stove, together with doughnuts, pies and sandwiches. This proved reasonably satisfactory in fair weather, but during periods of rain and snow, it left the customer a prey to the elements. A canvas canopy over the dispensing aperture was tried out, but that gave protection to but one customer at a time. To correct this objectionable feature, the springs of the wagon were discarded and the floor lowered to rest on the axles, providing standing room inside for such numbers as the length of the vehicle permitted. The venture was successful and though the aroused enterprise of restaurant keepers checked its development, the lunch-cart attained a permanent place in the esteem of those whose affairs took them abroad o'nights and won for its inventor a place in the annals of the profession.

When Jones first operated in Springfield in 1889, only the "depot restaurant" or a hotel was available for those who wanted meals out of hours. "Billy" Clough's pioneer restaurant on Main Street, near State, was begun in a small way on an all-night basis, three years later. Clough had worked in one of the "cake and coffee rooms" which the little stalls operated on the streets of New York were called, and when they were ousted by city ordinance in 1874, had followed his trade on the Bowery. Clough's restaurant was decidedly a forward step, but it was a far cry from its primitive layout, to the marble and tiled splendors of a later day. The development, however, proceeded rapidly, after it had once begun. By 1899 there were eight restaurants in Springfield open all night. The numbers, the equipment, the menus and (after the Spanish-American War began), the prices, developed apace.

Besides operating lunch-carts, which were towed every evening to the corners of Main and Court, Main and Bridge, and other strategic points and returned to headquarters in the morning, Jones manufactured lunch-carts at his shop on Union Street, until the arm-chair lunchrooms and the increasing demands of traffic put them out of business. With the years the carts became increasingly elaborate in their fittings. Very early they tapped into electric light circuits for illumination. As complaints became loud and insistent against such private use of public streets, the itinerants were compelled to rent parking space on private land. This permitted the removal of wheels and the installing of permanent brick foundations. Then came sewer connections as well as water and gas. In 1890 two cars of the local street railway were operated by electricity and by the summer of 1891, electric cars were running on all lines. Thus equipped, the road was able to operate much more economically with larger cars than horses could possibly draw and that situation threw on the

market numberless sturdily built cars which were in many ways ideal for conversion into permanently installed lunch-carts. Advantage was of course taken of the opportunity and the gypsy-like eating places multiplied to unexpected numbers. Soon came the realization that the business, as then conducted, could be much more advantageously operated in an established store, hence there appeared, the "dairy lunch", with branches in many cities and at least two of the best-known and most profitable of these chains originated in Springfield and still carry on.

One feels instinctively that no mere profit-hunter could have dreamed the lunch-wagon. A philosopher, with tincture of the psychologist, was required,—one who understood the hereditary or original whimsicalities of human nature.

The lunch-cart inventor was by no means the first itinerant purveyor of food. Before him, in this country, went the basket-merchant of the sandwich, hot dog, peanut and "pop". London has its roast chestnut and baked potato trader. Saturday night markets of the north of England were alive with the cries of the peddlers of tripe, hot peas, fish and chips. Along Glasgow streets moved the whelk-laden handbarrow,—the whelk being the seasnail, whose cooked body the buyer extracted deftly with a pin and ate with a relish of edible seaweed, locally known as dulse.

Perhaps the London coffee-stall gave to the inventor of the lunch-cart a suggestion. The coffee-stall was a dingy, unsociable and inhospitable affair. One stood in the rain, the keen winds searching to the marrow on winter nights, ate the food and gulped down the hot coffee, then vanished again into the darkness. The lunch-wagon afforded shelter and warmth. It was sociable and its hospitality leisurely.

In the majority of the smaller towns, in Jones's earlier days, the stores closed at six o'clock and a couple of hours later the restaurants and hotel kitchens were fast shut for the night. The native, unless socially engaged, was within his own castle, the drawbridge up and the portcullis down. After nine the policeman on his beat eyed the furtive and questing stranger with dark suspicion. Had he a home? If so, why didn't he stay there? The policeman did not realize that the suspicious look may have been that of a hungry man hunting for ham and eggs.

Into such dull-streeted communities came the lunch-cart, its cheery light shining like a hospitable deed in a chilly world. The "quick-lunch," whatever its merits in other directions, sought most of one's money and least of one's company. Eat, pay, get out, was its keynote.

Comparable with this was the cart's sociability, with its necessary element of leisureliness. Here met all sorts and conditions of men on democratic footing. One would be addressed either as "Bo" or "Brother" and only the out-of-place and haughtily supercilious person would resent either term, and such a person had no proper title to admittance and companionship.

Here gathered night workers with an hour to spend in eating and chatting, the night owl who sought sustenance before turning in, and he who had no place into which he might turn. Often were found in the company, dingy men with a suggestion of the eminence from which they had fallen, still irremovably upon them,—men who could quote Homer in his own tongue; could discuss philosophies that had never made them wise and economics that had failed to enrich them; those who knew the law and the theologies, as the heat of debate sometimes brought out. Lazarus has frequently a deeper acquaintance with life than has Dives, and for good or evil he is often far more picturesquely colorful.

In the lunch-cart atmosphere one might have heard the views of the man in the street on the vital questions,—anything and everything from the cross-word puzzle to the views of Conan Doyle and Sir Oliver Lodge on life after death and spiritual phenomena. Here gathered the satirist, humorist, raconteur, and over a post-prandial cup of coffee offered leisurely contribution to the discussion. The man behind the counter acted as chairman, kept order and saw, on the one hand, that the proprieties of debate were not disregarded and, on the other, that conversation did not languish for lack of suitable suggestion or incitement.

The able lunch-wagon manager had to possess other gifts than technical ability in the "short-order" line; he must know a little of most things, from the price of the Kentucky Derby favorite and baseball statistics, to the latest popular book that had been put into the movies.

This inventor of the lunch-wagon, was a publicist of parts, cutting some figure in the Populist campaign, thence developing sympathies for the Bryan Democratic party, and winding up as a Socialist. That he traveled along the road of minorities probably added to, rather than detracted from his attractiveness and influence, since opposition rather than acquiescence in popularly held views often makes for both color and backbone in the individual. He had an analytical mind that was shown in his discovery that even in the comparatively small town are diversities of appetites calling for differences in foods. It is said that he divided the town of his experiments into districts or belts; this section patronized the hot-dog predominantly; that the more aristocratic sandwich; the other,—probably New England to the backbone,—the pie.

Mr. Jones's interest in Populism and Socialism began at a particularly interesting period in the radical political history of the United States. Three Springfield names in the Populist movement stand out,—George M. Stearns (the banker not the lawyer), Charles R. Haradon, the bicycle dealer, and Mr. Jones. Jones has something in common with each of the two famous contemporary Samuel M. Joneses (both called "Sam"),—the "golden rule" mayor of Toledo and the rough-and-ready evangelist of Georgia. The Springfield Jones's spiritual relation to the latter is less obvious, perhaps, but

both were ardent in the propaganda of their ideas of what was good for the race.

It was during his activity as a Populist that Jones became acquainted with James F. Carey of Haverhill, who was one of the People's party's young spellbinders. Carey was a shoeworker. The shoeworkers, in 1896, went on strike and, as a result of his activity in their leadership, he found himself out of a job. Jones offered him a job in one of his Springfield lunch-carts and he took it. Carey was a Socialist before Jones was, and the lunch-cart rostrum became livelier than ever upon his advent. Carey afterward served five terms in the legislature as representative from Haverhill, elected as a Socialist.

Trade unionism was another fruitful topic of lunch-car discussions, and George H. Wrenn, veteran labor leader in state and city, was one of many who had the Jones lunch-cart habit. Both Carey and Wrenn, were several times nominated by the Socialists for governor. Jones had also been a disciple of Edward Bellamy and the onetime "Nationalists" found here many kindred spirits. There was a less acute suspicion of social radicalism in those days than there has been since. Communism as it is now known, had not arisen; the World War was far in the future; the Utopia of "Looking Backward" sent no shivers down conservative backs.

Eventually Jones elaborated the primitive idea to include a vehicle with ample room inside to sit or stand as one ate the sandwiches, doughnuts or pies which continued as the prominent features of the menu.

From the carts to the armchair lunchrooms was but a natural transition and in the beginning the "dairy-lunch rooms" closely followed the menus established by Jones. Between them, the lunch-carts and the dairy-lunches sounded the knell of the old-fashioned dining rooms in which only American-plan meals were served. Fifty years ago, Jones was renowned for the pies which he served and old-timers still contend that elsewhere there never were nor ever will be such apple pie as he dispensed.

Before he retired from the business there were hundreds of "night-lunch-carts" about the country, inspired by his example. Here and there a prosperous survivor is occasionally still seen,—carts with the same red stained glass windows and mounted, not on wheels, but on a permanent brick or concrete underpinning.

1875—New England Christmas

It is quite commonly assumed that Christmas celebrations in New England are of a type supposedly enjoyed by the founders of the country as is the annual Thanksgiving Day celebration. Such an assumption, however, is not justified by the facts. It is true that a book of Christmas carols was published in England in 1521. In the seventeenth century, George Wither (born 1588, died 1667) composed a well known Yuletide jingle:

So now is come our joyfulst feast;
Let every man be jolly,
Each room with ivy-leaves is drest,
And every post with holly.

Though other's purses be more fat,
Why should we pine or grieve at that?
Hang sorrow, care will kill a cat,
And therefore let's be merry.

Such compositions indicate the type of holiday celebrations common in the days of King Charles I, but as the Puritans became active in England, they frowned on such worldly affairs and when Cromwell came into power, any public recognition of the season was absolutely prohibited, especially in the churches.

John Evelyn, the diarist, records that on December 25, 1654 "There were no public offices in the churches, but penalties on observers, so I was constrained to celebrate it at home." In 1657 he said,—"I went to London with my wife, to celebrate Christmas-day, Mr. Gunning preaching in Exeter Chapel. Sermon ended, as he was giving us the Holy Sacrament, the chapel was surrounded with soldiers and all the communicants surprised and kept prisoners, some in the house, while others were carried away. It fell to my share to be confined to a room in the house, where I was permitted to dine with the master of it. In the afternoon came Colonel Whalley, Goffe and others from Whitehall to examine us, one by one. Some they committed to the Marshall; some to prison. When I came before them they took my name and address and asked me why, contrary to an ordinance made that none should any way observe the superstitious time of the nativity (so observed by them) and why I should be at Common Prayers which they said were but the mass in English. Finding no excuse to detain me they dismissed me so that I got home the next day."

In the late autumn of 1621, the ship *Fortune* arrived at Plymouth with additional settlers to further endanger the project at a time when discouragements were at their height. These new-comers were a worldly lot with little interest in the aims or intent of the project. Bradford recorded that "on the day called Christmas the Governor called the people to work in the usual manner but most of this new-company excused themselves, contending that it went against their consciences to work on that day. So the Governor told them that if they made it a matter of conscience, he would spare them until they were better informed. So he led the rest away, but when they came home from their work at noon, he found them in the street at play, openly, some pitching the bar and some at stool ball and such like sports. So he took away their implements and told them that it was against his conscience that they should play while others worked and that if they made the observing of the day a matter of devotion, let

them keep to their houses, but there should be no gaming or reveling in the streets. Since that time nothing of the sort has been attempted, at least openly."

As punishment in Old England became increasingly severe, New England followed suit. The colonists openly boasted that none of the holidays of England had survived the passage of the Atlantic and on May 11, 1659 the General Court of Massachusetts provided

St. Paul's Church, Stockbridge

that "whosoever shall be found observing any such day as Christmas or the like, shall pay for every such offense, five shillings as a fine." This law was repealed in 1681, but in the interim there had come into being a generation utterly lacking in any first-hand knowledge of Christmas-tide traditions. Not until 1789 was there any civic notice taken of the day. In that year the Boston schools, at the behest of the pupils, were closed for the day, marking Boston's first official observance of Christmas. Yet the town went about its business as usual. By 1828 editorial writers were lamenting the fact that so few stores were closed on Christmas and in 1859 Massachusetts made the day a legal holiday. The schools observed it, but scarcely anyone else. In 1860 the Springfield *Republican* made an editorial appeal for a greater recognition of the day and Olivet Church followed the example of the Catholic and Episcopal churches which for ten years had observed the day and its services were well attended.

Continuing its crusade, the Christmas editorial of the *Republican* of 1875 said that "not so many years ago it was only a church matter with too strong a flavor of popery about it for the New England Protestant palate. It is not yet twenty years ago that the

General Court created Christmas day a legal holiday and the first serious innovation on its secular character was made when the United States circuit court in Boston adjourned over Christmas, on motion of Mr. Lunt, the district attorney, who was an Episcopalian. The Puritan condemnation lingered long and the shadow of it lingers now in rural towns, but it is merely a shadow. All the churches are decorated with laurel and holly."

Up to 1885 the stores of Springfield were open all day but that year Forbes & Wallace, the Old Corner Book Store and Gill's Art Store closed at noon. Five years later Haynes & Company was closed for all day, while Forbes, Brigham's and a few others closed at 11:30 in the morning. In 1895 Smith & Murray, Forbes, Meekins, Haynes and the grocery store of E. O. Clark closed for the day while Johnson's, Gill's and Charles Hall's were open until noon but this was the last year for half-day closing.

In 1894, with the acquiescence of their Bishop, the priests of Springfield's three Catholic churches notified the partners of the Smith & Murray store that the Sunday before Christmas they should ask their parishioners to do no shopping at that store so long as it continued the practice of remaining open on the Holy Day. Mr. Murray scoffed at the thought that any such action would be of weight and remained open the entire day, but the result showed what team-work can accomplish and it was the last of such attempts. Soon all mercantile and business establishments followed the example of the retail stores and closed for the day.

Individual opposition continued amongst the die-hards of Western Massachusetts. The descendants of the old Scotch Presbyterians such as the Scotch-Irish who settled Blandford, resented any innovation or dictation, refusing to even debate the question. People yet living can recall the era when otherwise normal beings refused to join in Christmas dinner with their children and their children's children. It was entirely without rancor, but the old-timers simply would have no part in pagan rituals. Eventually, time either wore them down or carried them off and gradually there came to be the type of celebration common in the home today.

A little town in the Berkshires did more than its part in furthering the Christmas spirit. Credit for the idea goes to the Rev. C. Collard Adams, who was then pastor of St. Luke's Church, Lanesboro. There, on Christmas eve, 1875, gathered people from the village and from the villages for miles around, for word had gone forth that there was to be a Christmas tree in the church,—the first tree ever set up in a New England church. St. Luke's was an Episcopal Church and Episcopal traditions were never hostile to Christmas, as Puritan traditions were; most aggressively during the first century of New England life.

The year 1875 might well be termed the birthday of the spirit of Christmas in New England,—the hour of the whole-hearted acceptance of the traditions of the day.

The Christmas tree episode is not the sole claim to fame enjoyed by Lanesboro. Within its bounds is Constitution Hill, noted for its height and sweeping views of great beauty on which was the four-hundred acre farm of Judge Henry Shaw, member of Congress in the early 1800s. Included also is the site of the home of Jonathan Smith who lived there in 1788, and who made history by a speech which swung the Massachusetts Constitutional Convention into line to accept the Articles of Federation, banding the thirteen colonies into the United States of America. This action provided the name for Constitution Hill.

Crossing Western Massachusetts is a belt of readily soluble limestone, extending from Litchfield County in Connecticut to and beyond the Vermont border. In various instances, water and chemical action have combined to create some interesting caverns, more than forty of which are in Berkshire County. One of these is on Constitution Hill and known as Crevice or Counterfeiter's Cave. Tradition holds that long, long ago it was the scene of the illicit minting of silver. This cavern, which opens above a branch of Seecum Brook helps to complete a small boy's paradise.

Lanesboro's most noted son, Henry Wheeler Shaw was born at the family homestead on Constitution Hill in 1818. At the age of fifteen, he went west where he wandered about the country, working as a farmer, coal miner, boat captain, real estate agent and auctioneer, eventually returning, to settle down in Poughkeepsie, New York. There he wrote a series of popular comic sketches and collections of proverbs embodying much homespun wisdom in quaint speech and exaggerated misspelling. The first of these,—*Essa on a Meul* was printed in a newspaper published in his adopted home-town of Poughkeepsie, and was shortly copied throughout the country and in England.

He then compiled an *Old Farmer's Alminax,* a burlesque of the widely known *Old Farmer's Almanac.* The initial issue came out in 1870 and in the first three years more than 400,000 copies were sold at twenty-five cents each, grossing over $100,000. Such activities kept him occupied under the pseudonyms of Josh Billings and Uncle Esek and in 1877 his complete works were published. In 1879 there came loud calls for the author to adopt the role of lecturer, resulting in his appearance for as many as eighty times in a season. It was of course inevitable that such associations resulted in a recurrence of the suppressed nomadic yearnings, ending only when death caught up with him at Monterey, California in 1885. However, the body was brought back to his native Lanesboro, where it rests beside a great stone lettered with the name of "Josh Billings."

In October, 1948 the two hundred eighty acres remaining of the Constitution Hill homestead, including the large frame white house, where the celebrity was born was bought by Martin C. Reilly of Pittsfield for use as a home and for the raising of Christmas trees. It was only the second time in one hundred thirty years or more that the property has changed hands.

Louis Kossuth in Western Massachusetts

In December, 1851, Louis Kossuth, leader of the Hungarian revolution arrived in New York, in the interest of his cause. On December 10th, the selectmen of Springfield invited him to be the guest of the town and the following January the Massachusetts Legislature asked him to visit the Commonwealth. Owing to prior arrangements, Kossuth's reply to the local invitation was delayed until April 21, 1852, when he advised that on Friday, April 23d he would "start at eight o'clock from New York and arrive in the evening and remain till Saturday noon".

A contemporary relates:

"The announcement that he was to arrive in the afternoon train from New Haven, began, an hour before the arrival of the train, to attract a crowd of men and women until one side of the immense new depot was literally crammed. Outside the depot, the crowd extended to the Massasoit house on all sides and the house itself was full. All the windows and balconies of the buildings around were filled with ladies. Never did Springfield witness so large a crowd on any similar occasion. There could not have been less than five thousand persons on the ground. At a quarter before six the train arrived. When Kossuth made his appearance, such a shout arose as only such a crowd could make. Cheer followed cheer, as a posse of constables cleared the way. The progress was slow and the path was fairly fought to the door of the Massasoit. Once inside, the crowd there started the cheers again and, politely bowing to either side, he won his way to a private room.

"On receiving the Massasoit House register, he wrote 'L. Kossuth and Lady" and then, for a moment considering what place he should write as his residence, said 'I have no home' and accordingly wrote, 'Nowhere'. The five members of his suite then wrote their names, followed by the word 'Homeless'.

"By this time, the crowd outside began to grow wild with excitement, and as it was understood that he would make a brief address from the balcony of the Massasoit House, the multitude shifted ground into Main Street. At last, Kossuth made his way to the balcony and was received with tumultuous cheers that would not relent until he had proceeded several sentences in a brief and pleasant speech.

"It was understood that he would deliver an address at eight in the evening in the North Church (then on Main Street where the Carlisle building now is) but his fatigue was such that he felt unable to perform the task. In the evening, the selectmen had a conference with the committee of Dr. Osgood's church (First Congregational) and it was determined that the formal reception of Kossuth should take place at the church at nine o'clock the following morning.

"During the evening, Kossuth received several visitors from Springfield and adjoining towns. Among them were George Merriam of Springfield and his family, from three of whom he received a check for fifty dollars each.

"An hour before nine o'clock on Saturday morning, the tide of footsteps began to set in the direction of the church. For a half-hour or more the crowd was kept at bay, ladies only being admitted; but, at last, the force stationed at the door was overcome by the pressure and the edifice was carried by storm. Every seat and standing place in the church was occupied. Kossuth was received with great demonstration of applause.

"Hon. William B. Calhoun welcomed him to the city with a brief and eloquent speech. While Kossuth was speaking in reply, he was frequently applauded with enthusiasm, and when he concluded, six cheers were given.

"At the conclusion of his speech, Kossuth, in company with members of the state committee, took a carriage to the United States Armory. The National Horse Guards acted as escort. The streets were filled with people who had not been able to get into the church, and, when joined by the immense concourse that poured out of the edifice, presented a spectacle of popular enthusiasm.

"The Guards led the way up State Street and stopped at the shop where musket stocks are manufactured. Here Kossuth was introduced to Colonel Ripley, the superintendent of the Armory, who conducted him through the whole establishment. Kossuth was particularly delighted with the machinery for the manufacture of stocks and witnessed the manufacture of a stock from the rough block to the finished article. To the workmen he addressed frequent questions and always thanked them and gave them a cordial shake of the hand, in return for their answers.

"From the shops the company proceeded to the Arsenal, viewing the arms stored there to the extent of hundreds of thousands. While looking at them Kossuth exclaimed;—'If I only had these arms in Hungary and the enthusiasm of the people of Springfield to back them, I should have no fear for Hungarian independence'.

"Kossuth was then conducted to the top of the tower and shown the city of Springfield. A large number of ladies were congregated at the Arsenal and waved their handkerchiefs and flags with much enthusiasm. The guest and friends at last reentered their carriages and proceeded down State Street and up Main to the Massasoit House, from which, after a hasty lunch and the reception of several visitors, Kossuth and his suite proceeded to the Northampton cars and soon left Springfield behind him".

The Springfield *Republican* said:

"Never, probably, has Kossuth received, in a city of this size, an ovation so cordial, so hearty and at the same time so spontaneous as that which he received here. The impression he has left upon our citizens is a good one, and he certainly cannot be insensible to the honor Springfield has shown him".

On Saturday, April 24, Kossuth left Springfield for Northampton, where he spent Sunday, returning to Springfield on Monday. Of this journey, a contemporary reporter said:

"On Saturday afternoon, Kossuth was met at Springfield by Erastus Hopkins, of the State Committee and with his suite and the members of the sub-committee was conducted in a special car to the beautiful town of Northampton. The train in which he left Springfield was a special and performed the passage, without stops, in thirty-eight minutes. On the arrival of the train at Chicopee, a large crowd had assembled, who greeted the flying cars with hearty cheers and another crowd and another shower of cheers hailed them at Holyoke.

"Kossuth reached Northampton at three o'clock and was conducted to the front of the depot, where the Northampton Artillery and the Amherst Artillery, under the command of Colonel Haws and the Torrent Engine Company, Number One, was drawn up to receive him, the military presenting arms. He was greeted by the shouts of at least three thousand people, whose hurras were mingled with the sound of martial music and the thunder of artillery from the heights above the town. The procession moved to the residence of Erastus Hopkins, on King Street and proceeded to the First Congregational Church on Main Street. Here a dense audience was assembled, comprising many ladies, who received the illustrious Magyar with shouts of welcome. The audience was composed in great part of Hungarian bondholders, the doors having been open for the admission of bondholders at two o'clock and for the public generally after the entrance of Kossuth. Among the purchasers of Hungarian bonds were Otto and Jenny Lind Goldschmidt, Judge Dewey and many of the professors of Amherst College.

"The meeting was opened by a brief address from Mr. Hopkins in which he introduced Kossuth, who, in reply, spoke about half an hour. At the conclusion of his speech, he was reescorted to the residence of Mr. Hopkins, where he spent the Sabbath.

"At half past eleven o'clock on Monday morning, Kossuth with the state sub-committee and Mr. Hopkins, arrived at the railroad depot in Springfield, where, upon a platform which had been erected for the occasion, he was met by the state committee of twenty one senators and representatives who had arrived in a special train from Boston, but a few minutes before. General Wilson, the chairman of the committee addressed Kossuth in eloquent and appropriate terms, to which Kossuth replied. Colonels Chapman, Williams and Needham, of the governor's staff were then introduced and Colonel Williams, on behalf of the staff addressed Kossuth briefly.

"After the close of the speeches, the party proceeded to the Massasoit House, under the conduct of the governor's staff and the general committee. The crowd in the depot at the time was immense and repeated calls were made for a speech. In one instance, Kossuth stopped and remarked;—'We are old friends; you and I have met before'. This pleased the crowd and they fell back and Kossuth passed into the hotel. Soon after, General Wilson introduced to Kossuth the Rev. William B. Greene of Brookfield who presented him with a purse of one hundred dollars, the subscription of certain

inhabitants of Brookfield to the Hungarian fund and then addressed him as follows;—'The selectmen of Brookfield, local officers chosen by the people, have taken the liberty to send you the following letter, which they request me to read to you. As it is advertised in the newspapers that you will stop ten minutes in the West Brookfield station, the selectmen have instructed me to request you to defer any remarks you may be pleased to make, in reply to their letter, until they have the honor to meet you at that place. They send their letter to Springfield, in order that no moment may be lost and that you may have the whole time at your disposal when you arrive at Brookfield, for it is natural to suppose that the people would prefer to hear you speak, rather than to hear their own letter read'."

That part of the letter to which reply was asked, read as follows:

"Certain individuals in Brookfield have subscribed small sums to the Hungarian fund. We have to request, if it would suit your pleasure, that you would be so good as to touch with your hand, the notes they will receive in exchange for their subscriptions. So shall our children, when they touch these notes, touch that which you also have touched and thus they will be able to establish a certain solidarity between themselves and you. Who knows but what some magnetic influence may thus be transmitted to them, which shall strengthen their aspirations for freedom and thus increase the love of liberty in the world'.

Kossuth promised to reply to this letter of the selectmen when he should arrive at North Brookfield.

"At two o'clock, Kossuth and his suite dined at the Massasoit House with the State committee and a few invited guests. Immediately after dinner the committee, with Kossuth and his companions left Springfield in a special train. At Palmer, some hundreds of people were collected. Kossuth stepped to the platform of the car and spoke to them a few minutes. At North Brookfield a large crowd had collected at the depot. Kossuth left the cars to reply to the letter of the selectmen, which he said was one of the most gratifying he had received since his arrival in America."

Springfield later had one last, though fleeting glance at the Hungarian patriot. "With his suite he left Boston May 18, 1852 at eight o'clock on the regular train for Albany. The car bearing the illustrious guest of the state was beautifully and appropriately decorated, bearing on either side the words 'Cradle of Liberty' and having a gilded eagle each end, with the name Kossuth beneath it. A large company assembled at the Worcester depot to bid him farewell. At Pittsfield he was received by an immense concourse of people and presented with two cases containing eighty muskets. He arrived at Albany at four P. M. where the Massachusetts State Committee took leave of him."

Chapter XLVII

A General Survey

By William H. Clark

I

The Development of the Berkshires

WHILE the settlement of most of Massachusetts was accomplished with considerable rapidity, the development of the Berkshire Hills, which occupy the westernmost portion of Western Massachusetts, proceeded rather slowly. Indeed, children were born in Springfield, on the eastern edge of the Berkshires, and had their grandchildren about them well before there was any real occupation of the beautiful hills immediately to the west.

Today, the Berkshires, a prosperous agricultural area, basically, and also a thriving industrial region, plus a richly rewarding playground for summer and winter vacationists and weekenders, is now, very largely, tamed. In the beginning it was a howling wilderness. Early accounts of venturesome explorers speak of "horrid hills," and of "extreme bad riding; even the horses complained . . ."

In place of modern villages of note, such as Stockbridge and Lenox, and of such prosperous cities as Pittsfield and North Adams, the Berkshires were dark with unbroken forest cover, rude with craggy slopes, and turbulent with streams that rushed seaward, roaring and brawling in the narrow and steep-sided valleys.

The Berkshires, geographically, occupy the entire Western Massachusetts from just west of the Connecticut River to the New York State boundary. Actually, the hills are low mountains which are the southward continuation of the Green and Taconic mountains of Vermont. Geologists call them the Berkshire Barrier, as indeed they were for many years until two railroads managed to twist their way through about one hundred years ago. They are a high and very rough plateau. The plateau is roughly divided north and south by a long trough. Rising abruptly from the west bank of the Connecticut, the Barrier reaches westward in a more or less solid mass until, about in midsection, it drops again very sharply into the valley of the Hoosac River, to the north of Pittsfield, and into the Housatonic Valley, just to the south of that city. Beyond these two rivers, the hills rise

sharply once more into the Taconics and then drop most sharply of all into New York State.

As mountains go, the Berkshire Hills are not mathematically impressive. Greylock in the north rises to 3,491 feet, and Mount Everett in the south reaches up to 2,624 feet. However, they do rise abruptly out of narrow valleys and give the feeling of great height.

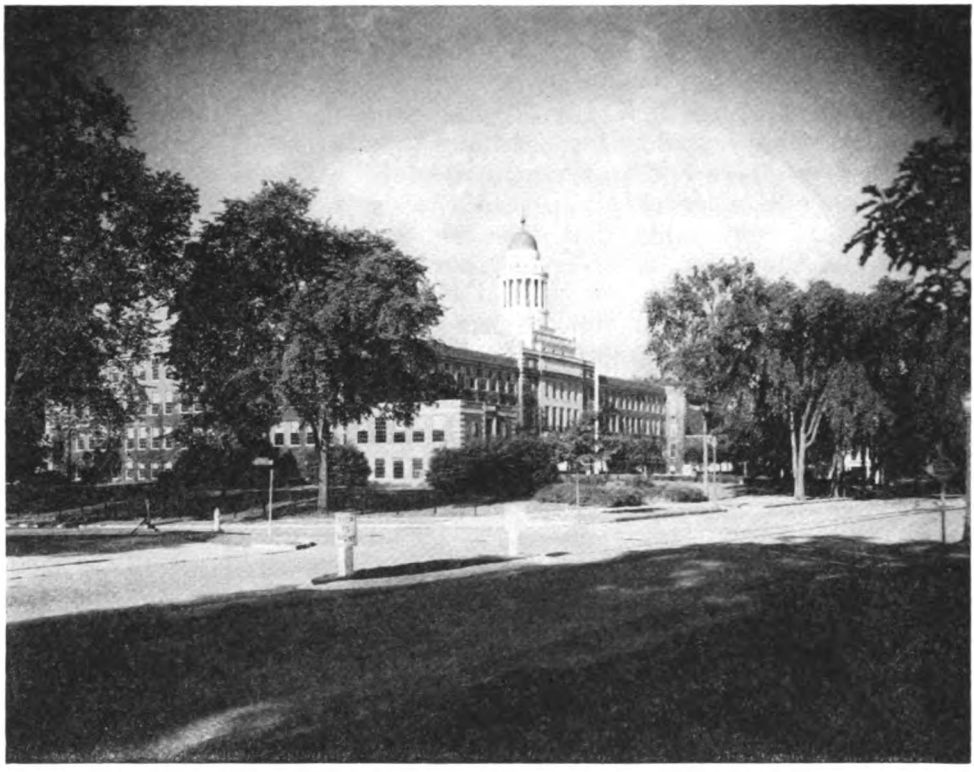
To motor through the Berkshires today is to visit an area, particularly the Hoosac and Housatonic valleys in the middle of the hills, that is very wealthy in industrial activity, a region also of prosperous farms, and one of the most famous oases of culture,—schools, colleges, literature and recreation. On the high and rocky plateau on either side of the valleys, however, second and third growth forest has slowly crept in over fields and pastures, and stone walls, reared with labor beyond modern understanding, remain to mark the sites of farms long vanished. Ancient roads, that once echoed with the clatter of horses' hooves and the creaking of the leather springs of stage coaches, are all but impassable, even on foot. But of beauty there is much; for hilltops give wide prospects over valleys and mountains.

No one knows who were the first to worm their way into the hills. Undoubtedly there were fur traders and hunters,—and men who, then as now, always want to know what is behind each successive hill. These first men probably made their paths along whatever natural streams provided a general progress westward. Wading beside streams, especially these swift, tumbling and twisting waterways, is far from easy,—and the problem was further complicated for the first explorers by the fact that eastward or westward running water is scarce. Again and again, they were forced to leave the streams and climb between the hills. This must have been very hard labor, for the virgin forest was not only dense but it was choked with tangles of grape-vines and barricaded with trunks of great hemlocks, oaks and birches that had fallen from extreme old age, or had been tumbled down in winter gales.

But men did get through and came home again, telling of the wilderness and the blackness of the forest, but also of open intervals where fields could be cleared and immense crops raised on the deep, alluvial soil. That forest is long since vanished. Farmers cleared land and left it, and the forest has returned but it is of an altogether different character, being much lighter and very much more open. Yet these areas of the Berkshires are, and will remain, a rich source of timber.

The Massachusetts General Court was active from the beginning in the encouragement of settlement in the Berkshire area. Despite the best efforts of the magistrates, however, settlement stopped just below the Berkshires proper, save at such points of easy access as Westfield, Deerfield and Northampton. Fear of the Mohawks seemed to be the major cause of reluctance on the part of settlers. Accordingly, the Court constructed a chain of forts westward across the northern section of an east-west line from Deerfield. The chain ended at what came to be Williamstown, and it did serve as a dam to halt

the Indians as they crossed in from New York over the famous Mohawk Trail. Indians were shut off to the north by settlements in Vermont, and by forts along the Connecticut River. Since few if any Indians acually lived in the Berkshires,—it was too rugged even for them,—it was chiefly raiding parties from New York State and from the feral St. Francis Indians to the north that caused the trouble.



Pittsfield High School

At that, it was the instigation of the French and later, the British, that caused the Indians to erupt, for the most part.

Probably, settlement of the Berkshires can be dated from 1722, when the General Court granted one hundred and sixteen men, led by Joseph Parsons, and sixty-one men, led by Thomas Nash, two townships in the Housatonic Valley. These settlers were allowed three years in which to prove their grants. The requirements were, in part, that they had to settle the land in a regular and military manner so that defense against the Indians was made practicable. The transaction was legalized by some Indians of the Housatonic tribe, receiving about two thousand five hundred dollars, thirty quarts of rum, and three barrels of cider; giving for this a deed to a vast area. This deed was executed despite rival claims from New York, alleging a previous purchase of the same land from the same Indians. The

resulting confusion was not finally determined until after the Revolution, when New York and Massachusetts, in common with other states, adjusted all claims through the new Federal government.

Meanwhile, settlement progressed. Matthew Noble, in 1725, built a cabin in what is now Sheffield, and in 1733 the area (it then included Great Barrington) was assigned to some sixty-nine proprietors. Interestingly, some of these families still hold their original grants, and farms of two hundred years ownership are not common in America.

The original Noble grant, and those of Nash and Parsons, which latter centered around what is now Stockbridge, were separated by the reservations assigned to "friendly" Housatonic Indians. The settlers did not like the situation, and the Indians were moved. It seems likely that they were treated with comparative humanity. Certainly, they were not herded together and exterminated.

Stockbridge was selected as the site of the Indian Town, and it served as a barrier against raiding, "wild" Indians from the north. A minister, John Sargeant, was employed by the Society for the Propagation of the Gospel in Foreign Parts, and liberal financing flowed in. Plows, books, and various supplies were given the Indians; a church and school were built; and the Indians themselves passed a law in "town meeting" which provided a fine for any person, white or red, who brought rum into the village. In 1739 Stockbridge was incorporated as a town, and two Indian chieftains were elected selectmen. However, white settlers gradually took over from the Indians.

This was no barefaced appropriation, for a few white men, though they waged a doomed struggle, did what they could for their charges. Conspicuous amongst them was the great Puritan divine, Jonathan Edwards. In 1750, Edwards, dismissed from his church in Northampton, came to Stockbridge and accepted the responsibility of guardian to the Indians. Not a leader in the political and economic sense, he did possess courage and honesty, and did all that he could. He was literally a saint and, between his theological labors in his study, he fought desperately to hold the white men to the original contract. However, the French and Indian wars threw a serious pall of fear over the Berkshires, and Edwards' task became nearly impossible. When he departed for his ill-starred presidency of the College of New Jersey (Princeton), he preached his final sermon to his mixed Indian and white congregation on the text,—"We have here no continuing city." He was perhaps not unconsciously prophetic. With his departure, and with the ending of the wars in 1761, the barriers to white settlements were removed. Stockbridge, an experiment in the absorption of Indians into the English way of life, was definitely ended.

The second phase of the settlement of the Berkshires was soon under way. Naturally, the movement followed the only trail that led through Springfield into the Housatonic Valley. It should be remembered that this was not a road in any modern sense. Among the early towns, other than those previously mentioned, were Blanford, granted

in 1735, and in 1736, Becket and Tyringham (Monterey) to the north of the trail, and to the south, Sandisfield and New Marlboro. These towns were not actually settled at once; indeed, Sandisfield was not an actual town for nearly twenty years. Settlement was also pushed north out of Stockbridge, and west up the Deerfield River from Deerfield.

The city of Boston, beginning the quarrel which has never since been healed, complained that, since it paid almost all the taxes for the colony, the city should be reimbursed by the gift of townships in the Berkshires. The idea was that Boston could sell the land to settlers and thus make some money to offset taxes. The three towns, which are today Charlemont, Colrain, and Pittsfield, were accordingly given to Boston by the General Court. Settlement of these was very slow and, during the Indian wars, the farms were abandoned in terror.

However, with the end of the wars and the consequent ending of the Indian threat,—until the British awakened it again during and after the Revolution,—the Berkshires were soon organized in a large part. There were towns on the map and towns in fact, with churches, schools, and farm houses. Really, what existed for years were tiny settlements, crowded together, while all about were the "horrid hills" still felted with nearly impenetrable forest.

The General Court to raise funds to pay provincial costs, then auctioned off the remaining unincorporated sections of the Berkshires. This led to the sale to the highest bidders, of the present towns of Adams, Peru, Worthington, Rowe, Hinsdale, Cummington, Windsor, and such parts of various other existing towns as had not been specifically granted. The price was about eighty thousand dollars; with the pound figured at about five dollars. Small as this was, comparatively, the province failed to collect much of it,—as some of the bidders refused to take possession or to pay the price, claiming that the land was not as it had been represented by the authorities.

Bad as this auctioning was, it did serve to attract settlers and the Berkshires were being rapidly developed when the Revolution arrived. Being largely agricultural, and proud of their new won independence, the Berkshire men and women were patriots. Indeed, as early as 1774 a group of responsible men met at Stockbridge and covenanted to purchase no goods of British manufacture, and to boycott merchants who did sell them. A few months later, a group of men from all sections of the area massed themselves about the meeting house at Great Barrington and prevented the court from sitting. Then, in late April of 1775, following the Battle of Lexington and Concord, companies of patriot militia, usually called Minute Men, marched away from the hills to help shut the British soldiers in Boston. All during the seven years of war which followed, the Berkshires were well represented in Washington's army. The section did its share in winning independence. Certainly, with manufactured goods shut off and with everything that the land could not produce being scarce and sky-high in price, there was much suffering in the hills. This economic sacrifice was further aggravated by the fact that so many men were away from home for so long. Farms cannot be

worked, even now, without men, and then it was a machineless agriculture.

When the war ended there was wild rejoicing in the hills, but the economy soon clouded over. Taxes multiplied and the money to pay them could not be obtained. Rebellion, the answer of Western Massachusetts to the intolerable situation, did not begin in the Berkshires, nor did it end there, but the aftermath raged on the road between Sheffield and Egremont. The fight was not much of a battle, when a column of militia seized a group of escaping members of Shays' forces. Two militia men were killed and two "rebels." A number were wounded as well. But that was the end of the rebellion.

Once the aftereffects of the Revolution were overcome, the period reaching to about Civil War times was that of the great agricultural expansion of the Berkshires. Together with this development of farming came, first, the growth of transportation, roads, canals and railroads, and, finally, the beginning of industrialization.

Indeed, the development of the Berkshires during this period was almost incredible. Listen to Dr. G. Stanley Hall, president of Clark University at Worcester. Writing of the glory and the tragedy of the Berkshire hill-towns he said: ". . . Nowhere has the great middle class been so all-controlling, furnished so large a proportion of scientific and business leaders, been so respectable, so well combined industry with wealth, bred patriotism, conservatism and independence. The (Bershire) farm was a great laboratory, tending perhaps rather more to develop scientific than literary tastes; cultivating persistency, if at the expense of versatility. I know of nothing more sad in our American life than the decay of these townlets."

The story of the larger cities and prosperous towns will be related in subsequent pages. Perhaps the decline of the little hill-towns can best be told by a single average example, since the story is duplicated in all.

Based upon an average town in the hills, from statistics compiled by the Office of the Secretary of State of Massachusetts, such a town would have been settled about 1750 and, within ten years, would be firmly established with about five hundred inhabitants. These people were all Puritans from the old settlements to the east, where there was no longer room for newcomers or the children of established families. The center of the town would be a hilltop as a sort of focal point. Here would be the church, the school and, eventually, the town hall and library. About these would be at first the rude homesteads, followed by decent houses of sawn timber frame, sawn sheathing and clapboards, with brick chimneys and glazed windows. Eventually these first houses would be replaced, at least by the more prosperous families, with gracious houses of exquisite architectural perfection of design and detail. Around this town center would spring up two or three or even more satellite villages, each with a subordinate life of its own.

Some twenty-five years later, at about the time of the Revolution, the town would have edged past the one thousand mark in population

and by 1825, when real prosperity was in swing, there would be some twenty-five hundred or more inhabitants. This prosperity continued for about thirty years more,—until the Civil War,—when, out of some two thousand or so inhabitants, the town would send at least ten percent of its boys and young men to maintain the Union. The Civil War marked the beginning of the decline. By 1875 fully half the population would have vanished. This decline would continue steadily thereafter, although at a decelerating rate, until about the time of the first World War, there would only be perhaps five hundred people in

High School, Northfield

town,—or about as many as there were five years after its establishment in 1750. However, the balance shifted the other way as industrious and agriculturally-minded immigrants, commonly from Poland, began to filter in. These ambitious and hard-working people,—even the women and the small children work on the land,—took over the wornout hill farms and made them prosperous once again. With its present population of perhaps seven hundred and fifty, the average hill-town has reached what appears to be its stable point. It may be that a shift in the national economy, particularly such a trend as the decentralization of industry, may restore vim and vigor to these old and nearly forgotten towns. But unless that happens, they should continue indefinitely about as they are now.

When at the height of its prosperity, this average hill-town could have had a wide diversity of industry. There would probably be several tanneries, perhaps a textile mill, making linens or, more likely, woolens. A hat factory, a creamery making cheese, a cooperage plant turning out tubs and barrels or just staves for assemblage elsewhere, a wagon factory, and several sawmills and gristmills. It might also

have a mill for pressing oil from flaxseed and, likely enough, a paper mill. In short, there were numerous and various shops, mills, and factories engaged in taking local raw products and producing manufactured goods for shipment outside the hills.

An ideal economy this, had not natural resources been rapidly exhausted. So today, this average town is little more than a group of farms with perhaps one or two small and very specialized factories or mills still operating, often on a part-time basis as the workers combine mill work in the slack season with their farming. The original center of the town is, likely enough, all but deserted, the public buildings gone to ruin or badly repaired, and the lovely old homes either forsaken or else kept spic and span for the tourist trade.

William Cullen Bryant, the great poet of the early nineteenth century, was born in the mid-Berkshire town of Cummington. From his writings, it can be learned that, in his boyhood, the Berkshires were so occupied with apple orchards that in May the country was a "wilderness of bloom." He adds that in October the major activity was the pressing of cider from these apples, and that the ordinary farmer thought little of "putting down a hundred barrels of cider into his cellar." During his years in the home village, Bryant recalled that Cummington used water power from its various small streams to operate woodworking shops, turning out many thousands of broom handles each year, and other establishments, including tanneries, woolen mills, cotton mills, grinding stone factories, and scythe factories.

The Berkshire hilltop hamlets are unique in American history; there is no other so well-defined area where a culture flourished so quickly and so prosperously on an agricultural basis and then, so suddenly and so completely collapsed.

The reason for the collapse is not simply given. The rich and deep soil of the Middle West, the boundless opportunities of the Far West, the craze for gold and silver in the Rockies and the Sierras, the richer opportunity and infinitely larger monetary rewards in the cities and in the great corporate industries—all the various attractions of the many-faceted life of modern America drew away the young people from the hills soon after the middle of the century.

Another great cause was the development of railroads. Steel cannot climb hills and thus the hill-towns,—and most of the Berkshire towns were perched high on their respective hills; the settlers liked it that way,—were left without bulk transportation. There were no trunk highways then, for there were no automobiles for trucking. Thus only the towns at low enough altitude to be reached by rails, and in particular only those fortunate enough to be on the routes of the Boston and Albany Railroad, the Boston and Maine Railroad, and the branch lines of the New York, New Haven and Hartford Railroad, had transportation. Industry, so dependent upon cheap transportation, migrated to or was established in, these railroad towns. Those without rails were left to agriculture.

And in this matter of agriculture, perhaps the greatest tragedy occurred. The soil usually chosen was on the hillsides and on the mountain tops, because the drainage of cold air in the spring and in the fall lengthened the growing season by preventing frost damage. The soil on these chosen sites was good; millions of years of forest growth had built up a rich layer of humus of wonderful fertility. However, once the trees were felled, the source of fertility vanished and the soil was quickly exhausted. Much of it was literally washed away in the spring downpours and in the summer rains.

While the soil lasted, the Berkshires enjoyed a magnificent self-sufficient economy in many items. Of course the farmers found it necessary to purchase some items,—but the list of goods which had to be "imported" into the hills would be amazingly small to modern ideas. As a matter of fact, the Berkshires enjoyed a very favorable "trade balance". This came about not because the needs of the region were comparatively low but rather because the Hills produced much that found a ready market outside.

Farm produce, from cheese to wheat, was avidly purchased by Boston and New York, both not much more than a hundred miles away. Then, with an abundance of water power from the turbulent streams, manufacturing plants in many forms sprang up and flourished. It was only natural, with plenty of timber to make charcoal and fairly good deposits of iron ore, that iron making and, consequently, manufacturing of nails, axles, tools and the like should spring up spontaneously. What was wrong was that the virgin timber supply was soon exhausted. Consequently the iron industry moved away to Pittsburgh and other places, where coal provided fuel.

Again, with a bountiful supply of cattle, originally established for the making of cheese in part, there soon developed an adequate and relatively constant supply of hides. With hemlock bark being then the best material known for tanning, and with the hills well supplied with age-old hemlocks just for the taking, it was to be expected that tanning would thrive. It did,—but only too well. The hemlocks vanished and tanning followed the iron industry into states such as Pennsylvania. Much the same story can be related of all the other industries, from the small farm shops to establishments which, with more abundant resources, might have developed greatly. But they were doomed,—save where the railroads provided cheap transportation.

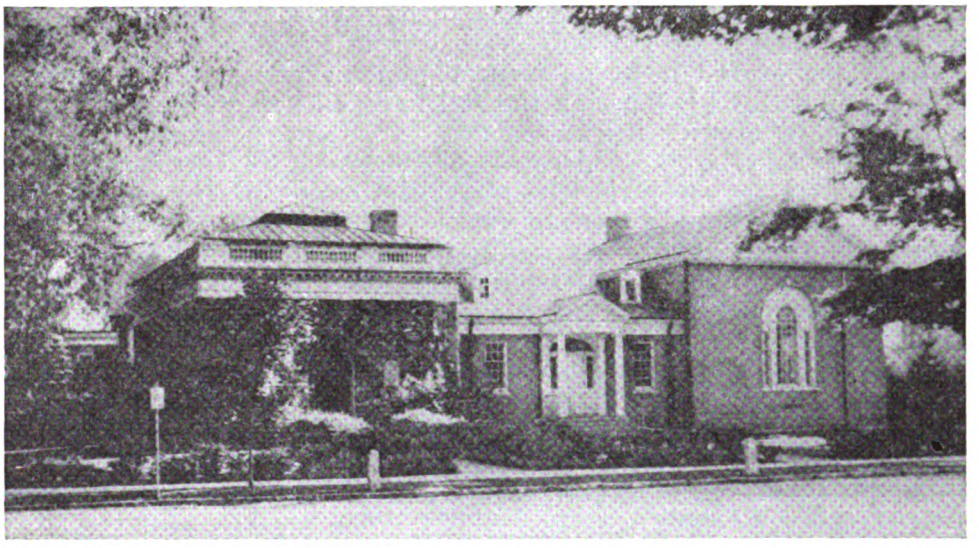
Aside from the depletion of resources, the Berkshire hill-towns were also the victim of two great forces for development which swept up and down and across the United States during the nineteenth century,—improvements in transportation and the change from a stable agricultural to a violent industrial economy.

As for transportation, the first development was, of course, the building of roads over which loads could be hauled not by plodding oxen but by swifter horses.

Road building in Western Massachusetts began during the last decade of the eighteenth century and by 1810, the Berkshires were

crossed from Northampton via Pittsfield to Albany. There were lesser roads through the region but this alone was the only highway that corresponds to what in modern days would be a smooth, paved, trunk line. By 1820, other roads were built through the area and, as a result several stage lines came into being. These provided some rapidity of travel, and also a means of hauling produce out of the hills to market.

While the side roads remained mere tracks, often muddy when not dusty, and so rough that wheeled traffic, when at all possible,



Library, Stockbridge

could proceed only at the proverbial snail's pace, the major roads became what is now loosely called turnpikes.

The turnpike was a means of obtaining comparatively good roads at no cost to the public purse. Private companies were chartered by the General Court to build a road from some particular point to another. To obtain a return on their investment, which for the times was usually very considerable, and also for the amortization of their capital, the company was permitted to charge a toll for every passenger, pedestrian, wagon, horse and rider—in fact everyone who used the road in any way. These tolls were collected at various points and the means employed to block the road to prevent patrons from evading the tax was the pike—usually a bar of wood suspended right across the road. An attendant, on payment of the fees, would remove, or "turn" the pike and thus open the way. As soon as the particular patron had passed, the pike was closed again to await the next patron. By modern standards even the best of these pikes were wretched highways, being no better than a well worn third class dirt or gravel road today. But, for the times, they were even as parkways are to modern cars.

At about the same time turnpikes enjoyed their mushroom development, a craze for canals swept across the area of America then sufficiently settled to require cheap, bulk transportation. Settlers used the rivers flowing out of the interior as their major highroads,—as the Connecticut and its tributaries to reach into Massachusetts and on up into New Hampshire and Vermont. This was suitable as long as human needs were simple enough to make transportation on the upper reaches of the streams possible by canoes dragged up through swift water by lines on the banks or by men dragging them as they waded upstream waist deep in water.

But as soon as bulk loads had to be carried in, and more vital, as soon as bulk cargoes of produce had to be freighted out to market, swift water proved to be an insurmountable handicap. So the idea was established of by-passing the fall line and white-water by canals running parallel with the streams.

So far as the Berkshires were concerned, the streams within the hills were too steep to permit canalization at any reasonable cost. All that was possible was to make the Connecticut navigable to vessels large enough to carry effective loads. Sailing ships could reach as far up the Connecticut as Hartford. From there on up, various troubles made navigation impossible. So a canal was dug from Hartford to Northampton and by 1850 extended on into the bottom of Vermont. This did help the Berkshires somewhat but, on the whole, canals were relatively unimportant.

What did boom the valley towns in the hills and ruin the hill-towns, was the railroad. Steel and steam worked a profound revolution. Probably few sections of the East at least were so affected as was self-contained Western Massachusetts.

As early as 1790, General Knox had astonished the nation by calmly proposing to dig a canal from Boston to Worcester and Springfield. Then in 1825, when Knox's plan was revived, the General Court was petitioned to dig a canal from Worcester up to near Greenfield and then, up the Deerfield River. When the great mountain barrier was reached, the canal was to dive right under it and to emerge into the sunshine again near Troy, New York. As said before, this plan was on the verge of being undertaken when the promoters switched from the canal idea to a railroad.

In January of 1829, the Board of Directors of Internal Improvements in Massachusetts, publically proposed to run rails from Boston to Albany and on June 23, 1831, the first step was actually taken when the General Court issued a charter for the first link in what was to become the Boston and Albany Railroad. This link was the Boston and Worcester, and work was pushed so well that in 1835 the forty-four miles were laid and trains rolled on July third.

The link to Springfield was also being pushed and, under a charter granted in 1833, the Western Railroad reached Springfield in October of 1839. Despite the great difficulties of climbing over the two heights of the Berkshire Plateau, the final section was jammed through with great enthusiasm via Westfield and Pittsfield, and trains began operating between Boston and Albany on December 21,

1849. Service has never been interrupted, save by washouts, since that time. The units were united in 1867, to form the Boston and Albany Railroad which operated as such until 1900, when it was leased to the New York Central Railroad.

This road made a tremendous difference to the Berkshires. At last they had a cheap and rapid means of communication and transport. That it meant the death of the hill-towns and the boom of Pittsfield and Westfield and associated towns along or near to the line, was not at first evident.

The other great railroad of importance to the northern half of the Berkshires is the present Boston and Maine, which enters through Greenfield and follows, almost exactly, the route picketed by the projectors of the original trans-Massachusetts canal.

The Boston and Maine is actually a composite of some one hundred sixty-five distinct railroads. The road directly important to the Berkshires was the Boston and Fitchburg. It subsequently became the Fitchburg Division of the Boston and Maine. Then the Boston and Maine acquired the road which had been built through Orange to Greenfield and eventually stretched its rails up the Deerfield River, winding its way through the hills until it faced the great bulk of Hoosac Mountain. Beyond was the Hudson so, through the mountain, the promoters of the road plunged. It was hard work and dangerous work but at last it was accomplished and Williamstown and North Adams were linked firmly by rail with Troy (and Albany) and Boston.

The Hoosac Tunnel, in its day one of the most celebrated tunnels in America, until it was eclipsed by those through the Rockies and the Sierras, still remains in constant use. For many years, engineers considered it a death trap as it was poorly ventilated and the sulphurous smoke from the stacks of the locomotives was difficult to endure. Then, about the turn of the century, the Boston and Maine changed to electric engines which dragged trains through without any noxious fumes. But today, thanks to the progress of engineering, once again the same locomotives pull trains of a hundred or more freight cars, each bearing fifty tons or so. These new locomotives are the giant Diesels, which are the most efficient and powerful prime movers yet created.

The Boston and Maine has had its troubles, financial and otherwise, but for a century now, it has served the Berkshires faithfully, making possible the great and continued prosperity of Williamstown and North Adams which otherwise would now be as nearly abandoned as the other neglected little towns far away in the hills.

To complete the story of the rails, mention must be made of the extension of the New York, New Haven and Hartford into the Berkshires as well as the further development of the Boston and Maine and the Albany in the region.

The first two roads built their trunk lines right straight through, twisting aside only as the topography dictated. Then, in the scramble for business, both the Albany and the Boston and Maine extended branch lines north and south at right angles to their main lines. This

proved a costly business in fact and most of the branches died or at the best survive mostly as freight service lines only. Two exceptions are noteworthy. First there is the extension of the Boston and Maine down from Greenfield along the Connecticut Valley to link Springfield, where the Albany and the New Haven meet, with the Boston and Maine line running on up the river into Vermont, New Hampshire and Montreal and Quebec. These lines serve to give a northern gateway to the Berkshires in competition with the Rutland and the New York Central running north to the west of the Berkshires. The other exceptions are the brief laterals of the Albany, hardly more than spurs, which tie in factories and mills otherwise without service.

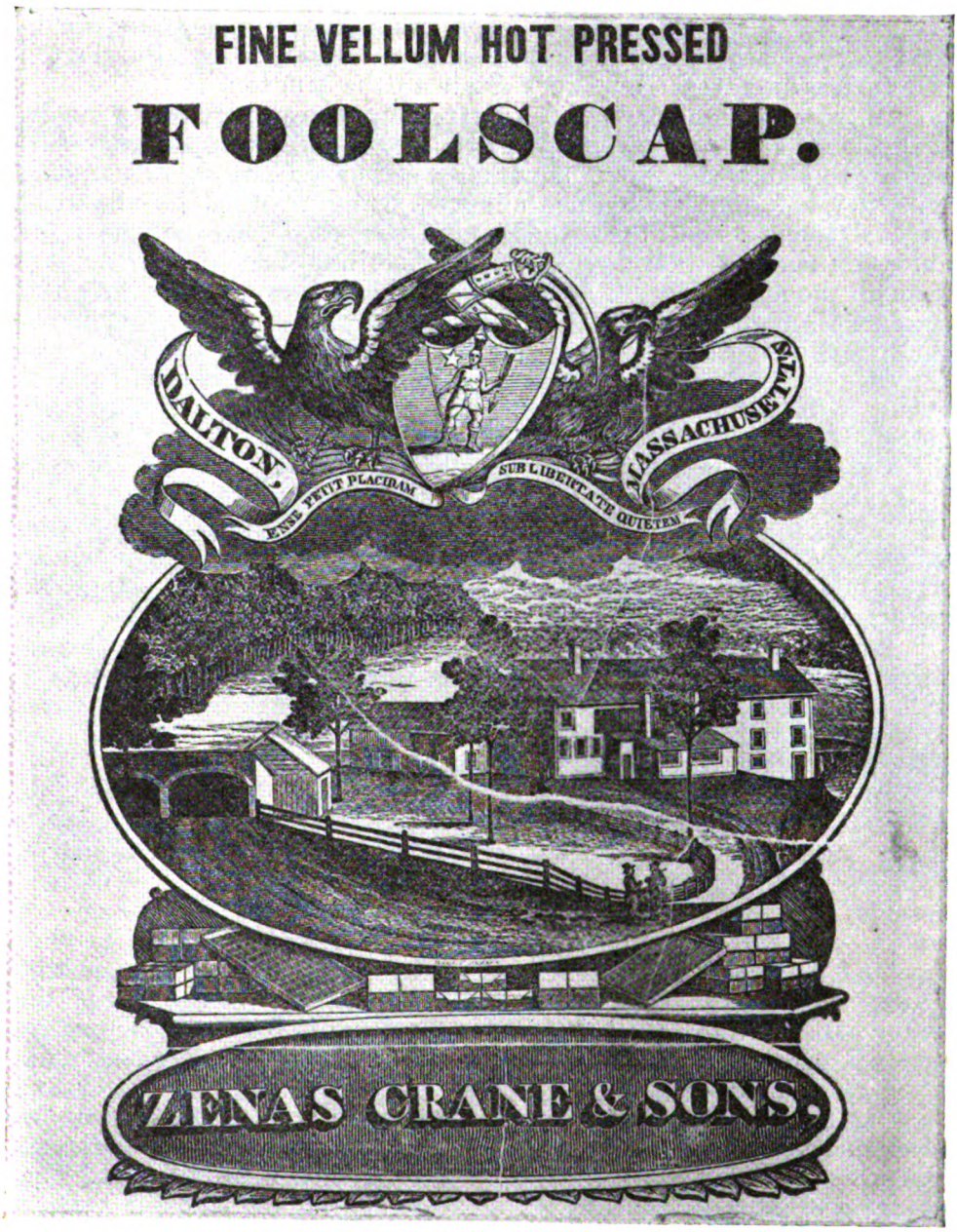
The New Haven, in competition with the Albany and the Boston and Maine for business out of the Berkshires, extended its steel very early up through New Haven to Hartford and on to Springfield; thus gaining much business which otherwise would have all gone to the Albany. The New Haven also ran a line up from Bridgeport, Connecticut, along the valley of the Housatonic to Pittsfield, thus again taking business to the west and south away from the Albany.

Thanks to the original prosperity of the railroads and the cheap and rapid transportation they gave the Berkshires, the turnpikes lost ground steadily and road-building fell into a period of long neglect. Of course, the highways between the towns were gradually improved but, as the hill-towns became smaller and smaller, as farm after farm, and mill after mill were abandoned, the roads that once served them were closed legally to traffic. The selectmen of the towns concerned, facing diminishing tax revenues, neglected to keep the old roads in repair. So the remote by-ways fell back into the welcoming hands of the forest.

However, the coming of the automobile, both as a pleasure car and as a freight carrier, has recently brought a great change. Smooth, reasonably wide and well planned roads, both primary and secondary, bring practically all the Berkshires into communication. Had this system of roads existed a century back, the history of the hills would have been very different—for modern motor trucks can compete successfully with the rails, with the added advantage that hills are not a deterrent to service. But it is too late for that.

The Berkshire road system is based primarily upon two main roads running from north to south and two more great roads running east and west. One of the north-south roads, running just east of the New York line starts at Williamstown, runs to Pittsfield and thence through Stockbridge and Great Barrington to the Connecticut line. The other north-south trunk line coming down out of Brattleboro in Vermont, runs through Greenfield to Northampton, Holyoke, Chicopee and Springfield to Hartford.

In the north the principal east-west route, often called the Mohawk Trail because it roughly follows the paths of raiding Indians coming in from Albany way, runs from Greenfield over the Hoosac Tunnel to North Adams and Williamstown to Troy. This is one of the most magnificent scenic routes in the country, affording a splendid



Early Crane Advertising Wrapper

view of mountain, forest and stream all along the greatest portion of its length. The other main east-west route, starts at Springfield and goes by Westfield, where it soon splits, one branch going northwest to Stockbridge and the other straight west to Great Barrington and thence on across New York State to the Hudson.

In between this quadrangle of trunk lines are many lesser roads, most of which are passable in all seasons, being kept open very successfully even in the worst of winter weather. There is still a third type of roads, those which are unpaved, being graveled for the most part, although some are dirt. In mud time these are not good for autos but most of the year, if a driver has time, they wind their way through the most pleasant scenery imaginable—sometimes they follow streams through heavily forested and steep valleys only to suddenly cut straight across a fertile and sun-filled intervale. More often than not they suddenly swerve straight up a hillside, at times so steep it seems as if the car was climbing a roof. At the summit, however, glorious vistas open out, views of mile upon miles of forested hills, the remoter hill-tops blue and purple, whence comes the nickname of the Berkshires, the Purple Hills.

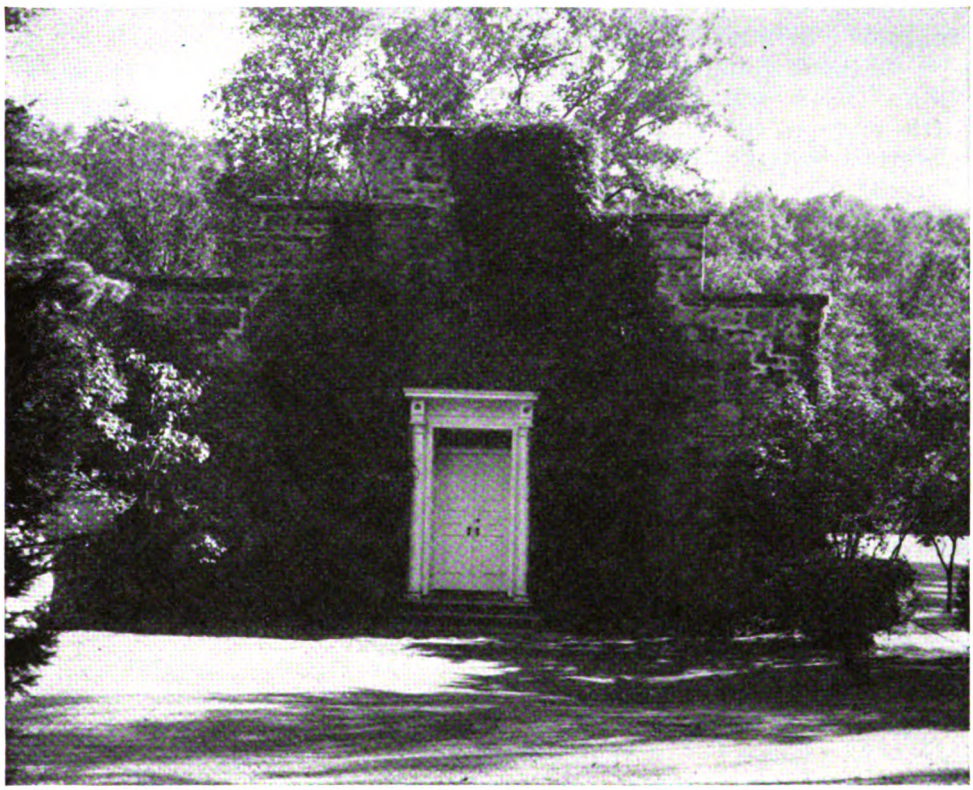
As for a general survey of the valley towns, as indefinitely distinguished from the townlets left stranded on the hilltop beyond the reach of the railroads, their history and their future are altogether different from their less fortunate neighbors.

At the close of the Civil War, with the railroads solidly established and a multiplying nation hungry for manufactured goods, the valley cities believed that theirs was to be a magnificent industrial future and the industrial development of the low-lying centers of the hills, those with good transportation, has been great.

One great business of the Berkshires was and is paper-making. About 1800, Zenas Crane founded what has become one of the world's great paper mills, and soon other paper-making establishments appeared at Stockbridge, Lee and Great Barrington. The great natural asset of the Berkshires in this business was its great abundance of water,—not just water power to turn the grinders and the other machines but unlimited amounts of pure, clean water. Paper making is dependent upon clean water for it uses vast quantities. If the water is not clean or pure, the paper resulting is both of poor quality and off white—things which fine paper must not be. Wood pulp, often called sulphite pulp, is not so particular about its water and such mills, which produce tremendous quantities from spruce, fir, birch and yellow pine, are located now in the regions of these forests and where water is abundant—but for really top quality paper, rags, or rag-content wood-pulp is used. Now rags are obtainable only in and near cities, where, commonly water is limited and poor in quality. Since rags are very light in weight, they can be freighted cheaply for miles. So the business takes its rags to where water is top-grade—and the Berkshires were and are just such a place. For example, the excellent paper needed by the government for our paper currency is still being made by the Crane mills—as are some of our best grades

of writing and record paper. These paper mills for the most part have continued to prosper and may well continue, for they are solidly established and firmly in control of their particular market.

There is yet one other type of industrialism. This is not based upon either nearness to market or an abundance of local raw material.



Crane Museum

It is rather founded upon an aristocracy of brains, plus a large body of trained and skillful labor. Such establishments may be founded and maintained nearly anywhere, but New England is pre-eminently such an area,—as witness the production of tools and machinery in various sections. The Berkshires also possessed and possesses this type of industrial resource, and of its application the City of Pittfield is a brilliant example.

Originally the home of many and varied industries, and the big market town of the Berkshires because of its accessibility and central seat, Pittsfield today is the home of the Pittsfield Plant of the mammoth General Electric Company.

The General Electric came to Pittsfield because Berkshire men had invented leading types of electrical equipment and had established plants to produce them. To obtain the types of equipment, the General

Electric purchased the plants. Since the plants were in Pittsfield, the General Electric came to Pittsfield and through the years the Pittsfield Works have developed vastly—and will probably continue to grow. Of course the transformation of Pittsfield from a quiet, charming, elm-shaded country town into an industrial city which has reached out its arms in all direction was an accident—the result of the brains and the ability of men who happened to be born and who continued to work in the Berkshires.

Without going into detail, two men are probably mostly responsible. There was Stephen Field of Stockbridge who, working in a little shop in his native town, developed many of his inventions in electrical equipment and appliances into such prominence that the General Electric had to take over or face unwelcome and uneconomic competition. There was also William Stanley of Great Barrington, who invented and designed the best, practical electric transformer, a device which steps up or steps down the characteristics of a given electric current. Modern transmission of power would be impossible without transformers, which, for example, takes the tremendous surge of 50,000 volts or better in high-lines that stride across the nation, and brings it down to the voltages for industries and for home use. Stanley established a factory for himself in Pittsfield to produce his transformers commercially and also to develop Field's inventions as well as others of his own. The General Electric also believed that it needed Stanley's transformer and they took it over by purchasing his patents and his factories.

A fuller development of the current industrial picture in the Berkshire district of Western Massachusetts is presented in the ensuing section entitled Berkshire Business.

II

Berkshire Business*

Just as in most of America, industry and business in the Berkshires is more or less in a condition of flux. Some of the old, antebellum firms are still functioning vigorously and are hale and hearty. Then there are the war-boom born organizations which, after an amazing mushroom development, are endeavoring to continue in the postwar world where sales competition in a buyer's market is presenting serious problems. Finally, there are new establishments. Some of these are branches of large firms being established in the Berkshires for various reasons, some of which are concerned with the tendency to decentralize manufacturing. Other new industries are original ventures on the part of organizations which accumulated capital during the war in products for which there is no longer (temporarily, at least) a market. Finally, other new firms have been established to produce new products which are, in part, the practical

* Much of the material in this chapter by permission from *Industry*, publication of the Associated Industries of Massachusetts.

development of war-born techniques and materials. Thus, business in the Berkshires is today in a condition of blended solidity and adventure.

ADAMS AND NORTH ADAMS

These two towns, hidden away in a mountain pocket in the northern corner of Western Massachusetts, owe their prosperity principally to the strength of character their citizens exhibited in conquering the problem of transportation. The Adamsites found about 1840 that they could not grow or even long continue behind their twin mountains of Greylock and Hoosac—unclimbable walls.

Foodstuffs alone, save those which the largely self-sufficient farms produced, cost terrific prices. A few pounds of salt brought ten dollars. Thus it was clearly impossible to develop industry of any kind—as the cost of bringing in raw materials and of taking out processed materials was prohibitive. The only answer: bring a railroad through. Greylock could be by-passed by swinging north into Vermont and then south again through Troy to Albany. But, to reach the sea, the bulk of Hoosac had to be pierced in order to make use of the valley of the Deerfield River, which rails could follow to Greenfield.

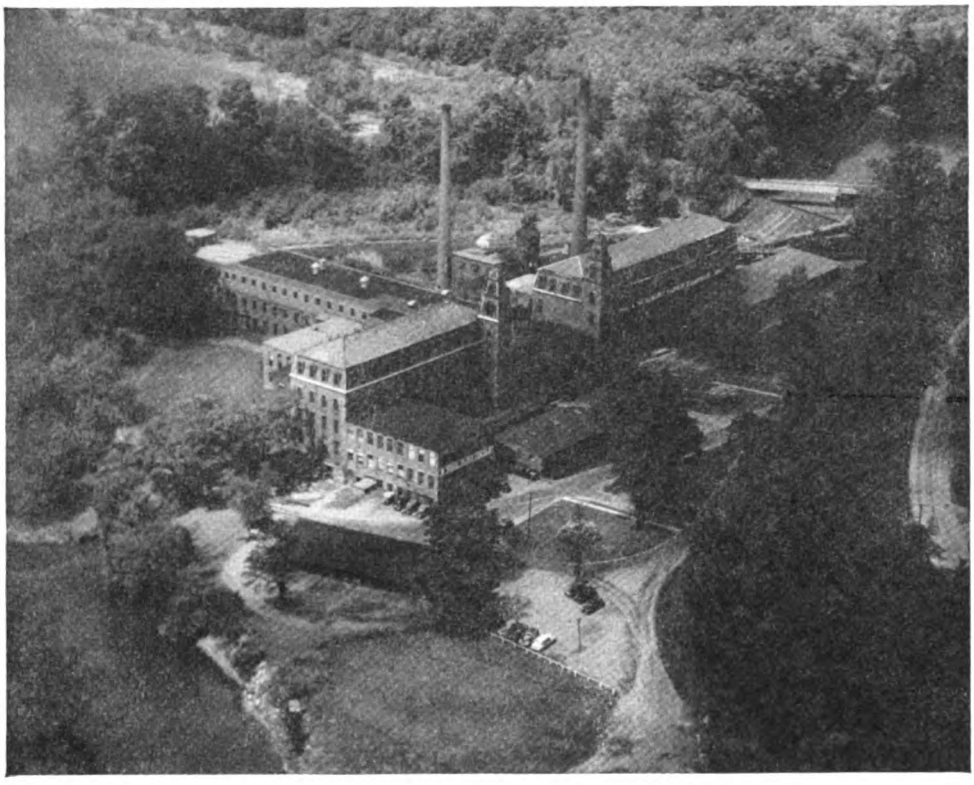
The Troy and Greenfield Railroad was chartered in 1840 to dig through Hoosac mountain but the work languished. In 1851 the job was resumed and in 1875 the first train rolled through the five-mile bore. Adams and North Adams had their link with the world. Cheap transportation was available and the industrial development of the two towns leaped ahead. It has never halted in the following seventy-five years.

Industries presently operating in Adams include: L. L. Brown Paper Company, manufacturers of fine paper; Berkshire Fine Spinning Association, producers of fine cotton cloth; Aspinook Corporation, formerly the Arnold Print Works, Inc.; New England Lime Co.; Hoosac Valley Lime Co.; Brightwater Paper Company, paper manufacturers; Berkshire Textile Company; and Dewey and Almy Chemical Company.

Industries operating in North Adams include: Blackington Mills, Inc., fancy woolens and worsteds; Banker Cigar Company; Gale Shoe Manufacturing Company; Sprague Electric Company; Strong, Hewat Company, fancy woolen goods; James Hunter Machine Company; Wall-Streeter Shoe Company; H. W. Clark Biscuit Company; Madonna Mills, Inc.; Consolidated Textile Corporation, Windsor Print Works Division; Hoosac Mills Corporation; R. J. Widen Company, tannery; and S. B. Dibble Lumber Company.

The Blackington Mills had their beginnings way back in the opening of the nineteenth century and the firm has always been one of the best known organizations in the hills, enjoying the support of the citizens as individuals. For example, in 1940, when the suspended Blackington Woolen Company required new capital to be re-organized as the Blackington Mills, Inc., local residents of North Adams them-

selves subscribed $24,000. This is not much money but it is a thumping big testimonial to the faith of the people who are employed in the mills in the integrity and ability of the Blackington management. This new organization has justified its local confidence for the woolens, worsted and overcoatings now produced are of such quality



Rising Paper Company Mill, Housatonic

that every yard of cloth the four hundred employees can produce is promptly absorbed by the market.

The Arnold Print Works, as such, was a casualty of World War II but, under the new Aspinook Corporation management, production never ceased and today twelve huge printing machines roll out ten or fourteen colors continuously to convert plain cotton and rayon cloth into gorgeous drapery and slip-cover cloth for furniture. Some 800,000 yards are produced each week by the six hundred employees.

Textile machinery is the product of the century old (in 1947) James Hunter Machine Company. The company produces a complete line of wet finishing equipment for woolen and worsted mills, including wool scouring, stock drying, fulling mills, cloth washers, dye kettles, tenter and carbonizing dryers, needle looms and garnet equipment for felt and wool shoddy manufacturers. The company is one of the

seven manufacturing companies in the United States which has been continuously operated for five generations by the same family.

Lime is one of the oldest products of the Berkshires. The Hoosac Valley Lime Company produces a lime of high calcium content. For fifty years the company has produced ordinary lime, a lime product for cattle, an agricultural lime and limes for the paint, rubber, putty and plastic industries. No lime is sold to the building trades.

The L. L. Brown Paper Company was established in 1849 and has continuously produced papers of the highest quality ever since under the management of the same family. The two mills now operated by the company are among the most modern paper plants in the country. The company began making paper with white rags. To this day, not a scrap of colored rags has ever entered a Brown permanent product. The company specializes in ledger papers but it also makes linens, bonds, parchments, onion skin, exchange cap, manuscript covers and typewriter papers. However, the company, since the beginning, has emphasized the production of papers which must either stand up under extreme handling or endure for unlimited years.

All over America, men who wear high quality shoes, know the Wall-Streeter Shoe Company, in the two brands of "Foot Pals" and "Styl-Eez". This Adams company has never been bothered by depressions as the demand for their shoes has always exceeded the supply. In 1912, the company began business with ten shoe workers; today it employs about four hundred. During the war, the company supplied the armed forces to the limit of its capacity but now it is back again in civilian production.

In 1896, when Strong, Hewat and Company began business, they hired about fifty employees to produce men's fancy woolen suitings. Today, they employ about four hundred workers and produce about 1,250,000 yards of goods annually. The company performs all the process of converting raw wool into finished cloth. It is the only local woolen mill with an unbroken record of operation. It is a specialty of the firm to have some four hundred different patterns on hand. Some of these patterns were created to order for certain customers who knew what they wanted, and goods so styled for a particular customer are not available to any other customer.

The Sprague Electric Company was founded as the Sprague Specialties Company in Quincy, Massachusetts, to make parts for the then infant radio industry. In 1930, having outgrown its quarters it moved to North Adams and hired four hundred persons. Today the company employs two thousand five hundred men and women, plus several thousand others in the plants of sub-contractors. With nearly 10,000 items in annual production, the company has produced all types of fixed capacitors, many types of fixed resistors, networks and other sub-assemblies, certain types of coated wires and many specialties.

R. J. Whidden Company, one of the junior industries of the town, now operates the old Barber Leather Company, replacing old-fashioned tanning with bark by modern processes. In addition to cow hides, the

company processes buffalo hides and also pigskins from South America.

New England Lime Company operates modern rotary kilns and has recently ceased production for masonry and plaster and entered the field of industrial specialties, such as paints, rubbers, paper and pharmaceuticals.

The S. B. Dibble Lumber Company in addition to retail sales, operates a millwork plant turning out all types of cabinet and mill work as well as a modern dry kiln.

The Dewy and Almy Chemical Company's plant manufactures materials for shoe factories as well as print blankets for the textile print works.

North Adams and Adams are served by eight banks, four in each community, and both by the North Adams *Transcript,* one-hundred-six year-old daily.

CHICOPEE

This city of 41,664 citizens bases its industrial life upon the manufacturing of tires, radios, electrical appliances, upholstered furniture, knit goods, looms and sporting goods. In this last field, Chicopee is one of the outstanding communities in the nation.

A. G. Spalding & Bros., Inc., well-known sporting goods factory, last fall held open house to welcome the community to its new plant, one of the most modern as well as one of the largest in the country. It covers some fourteen acres and employs about 1,700 men and women.

The plant is in effect a group of industries within an industry. A complete rubber factory, machine shops, woodworking shops, and a leather factory all unite to give the company world leadership in its field.

The plant uses more than a million pounds of steam every working day, enough to pull a 100-car freight train from Boston to New York. It consumes four million gallons of water daily and enough electricity to supply all the needs of a city of 20,000 persons.

EASTHAMPTON

In this valley city, all America has an example of a community that can stand up to a crippling economic crisis and, mastering it, go on to prosperity.

Manufacturing began in Easthampton one hundred twenty-four years ago when Samuel Williston began the production of cloth covered buttons. Williston, the son of a minister, was for his day an industrial tycoon, for he soon added to his buttons the manufacture of cotton yarns, suspenders and other elastic products. This final business has persisted through the years and is today the town's leading industrial project, the United Elastic Corporation.

The cloth covered buttons were made by hand for the first few years by Williston and his wife. Soon, he discovered that he could

make more money by having other people do the work and soon he had perhaps a thousand farm families spending their spare time in his employ, doing the work in their own homes and delivering the finished product to him. However, Williston found that hand labor was not sufficiently productive so he employed Joel and Josiah Hayden of Williamsburg to develop machines which would produce the buttons. The machines successful, Williston took Horatio G. Knight into partnership and this firm continued until 1865 when the National Button Company was founded. Eventually, Easthampton lost the leadership in the cloth-covered button business, as it spread into other states, but the business has continued.

Of course, through the years, Easthampton became home to various other industries. The greatest of these was the West Boylston Manufacturing Company, a textile firm employing nearly two thousand hands. In 1931 the company moved out and Easthampton seemed destined for economic doldrums. However, the same spirit that fought back the Indians one hundred fifty years before and the same abilities that created the town's industries in the beginning were not lost. All the townsfolk united, fed the 1,700 unemployed, and pulled in new industries until the town hit a higher level of employment than before the collapse. This same spirit is continuing to bring the town into higher and higher levels of prosperity.

The United Elastic Corporation is now Easthampton's leading industry. It was created out of three Easthampton mills and an "outsider". It is now the largest elastic manufacturer in the world, with eight plants in New England alone. In Easthampton, it employs about one thousand men and women. It is led by the Glendale Elastic Fabrics Company, founded in 1859 by Samuel Williston. The new corporation's executive offices are, appropriately, in Easthampton. Among its various products is the new "Anchortex" belting, a non-stretchable webbing with non-skid rubber ridges interwoven on its surface.

Nickel Cadmium Battery Corporation is Easthampton's new industry which produces a type of storage battery which, in most of the world, is considered superior to the ordinary lead storage battery, so widely used in the United States. It is alleged that the nickel cadmium battery, unlike the lead battery, has a long life; indeed, it is said that this type of battery outlives the car in which it is installed. The Easthampton plant of the company is still considered to be in "an experimental stage", because American users have not as yet accepted the battery on a large scale. Thus the plant is not in mass production although it is anticipated that it shortly will be so, as the battery is becoming accepted by many industrial consumers.

Stanley Home Products, another of Easthampton's outstanding newer organizations, has grown rapidly to national importance. It produces brushes, mops, brooms and cleansing products which are being used by American housewives everywhere in the great business of cleaning things from pots and pans to rugs and windows.

The Advertising Corporation of America is another of the new firms which moved into Easthampton in the dark days of 1931 and helped the town. It employs about two hundred people in the manufacturing of year books, diaries, memo books, billfolds and desk and pocket specialties of leather and imitation leather. These are used in tremendous quantities for good-will advertising. It is a completely modern plant, all but one department. In that, hand labor is still used as it has been for centuries—the application of gold edges to books and diaries.

When the West Boylston Company, textile mill, moved out in 1931, two of the firms which moved into the vacated quarters were the Hampton Print Works and the American Thread Company. The former, a division of the Aspinook Company, employs about five hundred people, in the finishing of cotton piece goods, such as shirtings, dress goods, play suits, swim suits and the like, in such operations as bleaching, dyeing, mercerizing and plisse work. The American Thread Company, conducts yarn making operations.

The Textron Company, one of New England's leading textile firms, maintains a plant in Easthampton which employs about one hundred fifty persons in the present production of men's sport shirts,—cutting, stitching, laundering and packaging. During World War II, the firm produced army clothing, at an estimated total of eight million units.

Another Easthampton firm, the Hampden Specialty Products Company, produces metal furniture, including steel folding chairs and tables, for homes, churches, institutions and bridge parties. It also produces wheel chaises, bridge sets and summer outdoor furniture. About three hundred people are employed.

The Paragon Rubber Corporation, another newcomer, employs some one hundred twenty-five men and women in the manufacture of a general line of molded rubber products for the electrical, plumbing and aviation industries to order.

A new and vigorous firm is the American Maid Footwear Company with some two hundred fifty employees producing ladies' play shoes and slippers to the total of about 4,000 pairs a day.

A separate enterprise but associated with the Paragon Rubber Company is the Manhan Wallpaper Company, a very young but growing firm producing high-grade wallpaper. Another newcomer is the MacMorin Company which specializes in metal stamping and in stamped metal components for electrical and household appliances. A third newcomer is the National Felt Company where felt piece-goods are produced, principally for sporting goods, pennants and slippers.

Pro-phy-lac-tic Brush Company, Florence, manufactures, in this quiet town, one of the oldest nationally advertised products in the drug field: the Pro-phy-lac-tic toothbrush, used and sold throughout the United States and which, prior to World War II, was distributed in over ninety different export markets. The company's reputation for quality and fair dealing has stood for over a century. The

Pro-phy-lac-tic Brush Company started in business as a plastics concern in 1843, and now distributes many items under its brand name. Today, one of these items alone, plastic combs, averages a sale of many million units annually.

It is not so well known that the company manufactures such products in addition to its popular and widely known toothbrush. Yet it is one of the pioneer manufacturers of hair brushes, which it has manufactured since 1866; and its present plant has a production capacity of 30,000 to 40,000 brushes a day. It now also produces a line of toilet brushes sold under the trade-mark name of "Jewelite", and recognized as a leader in its field. In recent years, due to increased facilities for molding items by the injection process the Pro-phy-lac-tic Brush Company entered the comb field, and has captured a large part of the plastic comb market, covering items ranging in price from fifteen to fifty cents.

Initially, the Company was known by the firm name of The Florence Manufacturing Company, and the work of its craftsmen was known far and wide. Since its founding, it has placed much emphasis upon the necessity for national advertising. It was, indeed, the first manufacturer in its field to advertise, and the first to offer its customers a guarantee on its product. Since the turn of the century, the name "Pro-phy-lac-tic" has claimed attention from the pages of many leading magazines. Throughout this period, *The Saturday Evening Post* has been one of its consistent media; and the Curtis Publishing Company, which publishes the *Post*, has stated that only one other company exceeds this manufacturer in its consistency in advertising in their pages. In addition to a "first" in advertising, the Pro-phy-lac-tic Brush Company has a claim to other historic "firsts" in manufacturing. It was the first to standardize the shape and design of toothbrushes, and it started the practice of packaging each brush in a separate sanitary cardboard box. The company has also been a believer in the importance of displays at point of sale, and has invested millions in such counter and floor displays as an appeal to customers' "impulse reasoning". During the past fifteen years or more, the company has spent an average of over a million dollars per year in advertising and selling.

When the company first began operations, the manufacture of a toothbrush was a slow, methodical process in which all procedures were performed by hand. Handles were formed from bone, and the hog bristles, after having been carefully sorted and graded, were affixed to the handle by a painstaking operation. Now, however, handles are molded from plastic at a high rate of speed and the brushes are stapled rapidly, in machines capable of handling four hundred brushes an hour. With improvements in packaging, consumers no longer find brushes displayed in baskets without wrapping, but in clear, transparent cartons which increase the item's salability.

In consequence of its studies in the dental hygiene field, Pro-phy-lac-tic has also successfully undertaken the manufacture of two dental powders: Pro-phy-lac-tic brand tooth powder, which bears the seal of approval of the American Dental Association; and

Perma-Grip denture powder for plates and dentures. Today, a variety of products, off the beaten path of the company's original manufacturing program, are being manufactured: flashlight cases, refrigerator panels, cosmetics containers from the injection plant; hairbrushes and combs, mirrors, made of transparent shades of ruby, sapphire and emerald; clock cases, flatiron handles and display units in the recently completed compression plant.

Although the toothbrush for which the firm has become famous first appeared some time after the beginning of the company's operations, the Pro-phy-lac-tic Brush Company, then the Florence Manufacturing Company, had its beginning in 1843, and its first products reached the market the next year. It was in its first years a plastics concern, and its first products were buttons, daguerreotype, revolver cases, and picture frames made out of a plastic composition which had been invented for the purpose. Business thrived from the start, the mill running day and night most of the time, and employing two "sets of hands", or, as they would be called today, two shifts. The number of employees was then twenty-five, and the yearly payroll about fifteen thousand dollars, as compared with wages paid today amounting to over three million dollars. In 1866, a new factory was built on the present site. There, during the 1880s, the first hair brush was manufactured. In 1884, the company first began making toothbrushes under the trade names of Florence, Paragon, Monogram, and others. The handles for the first brushes were made from the thigh-bones of cattle, and the holes for bristles drilled one at a time by a chuck operator. Bristles were inserted by a hand process called trepanning. It was later in that same year that the first Pro-phy-lac-tic toothbrush was sold. It was a new patented type, with a tuft end—the first toothbrush to be individually boxed—which gave it its name—and the first to be widely advertised. Standardization in shape and design of toothbrushes, and a guarantee of quality, were also inaugurations of the Pro-phy-lac-tic Brush Company. Most of the machinery in use at the plant was designed and manufactured by company personnel. A modern innovation is the use of injection and compression molding, begun in 1940 in the division known as the Prolon Plastics Division. Its growth in recent years has been phenomenal, and during World War II its products were vital in the war program. Perhaps the most publicized was the conical housing for the V-1 fuze; but the company also engaged in the manufacture of life raft pumps, radar equipment, a battery for jet planes, magnetos, batteries, bayonets, kit knives, radio coils, and a variety of airplane parts. The diversity of this modern manufacturing plant, and the adaptability of its engineering staff in meeting varying demands, are representative of the ingenuity which founded it and has brought it continued progress.

GREENFIELD

The world over, Greenfield is famous for its taps and dies. Without these tiny items, not a single high-grade machine could be made. Indeed, these taps and dies, as well as the other highly per-

fected small tools, alone make industry, not only in America but in the world, possible as well as profitable. These are the tools that are used to manufacture tools.

Greenfield Tap and Die Corporation is the center of this most important production that gives Greenfield its place in the sun. Its story is told elsewhere in this work.

The Millers Falls Company, nearby Greenfield, has, since 1868, been internationally famous for the highest quality in metal and woodworking tools, such as precision measuring tools, mechanics' hand tools, portable electric tools and metal cutting devices. The variety manufactured can be visualized by the fact that its recent catalog consists of two hundred four pages!

Recently, the scope and size of the Millers Falls Company has been multiplied by the mergers with the West Haven Manufacturing Company, metal cutting blades, and the Goddel-Pratt Company of Greenfield, manufacturers of a varied line of hand tools.

The Threadwell Tap and Die Company goes back beyond the organization date of the present corporation, 1934, to Civil War Days, when the original company was the first to make cutlery in Greenfield. During the late war, this organization contributed much to the production of the Garand rifle and the Springfield machine gun. Present production is composed largely of dies, taps, screw plates and counterbores, to name only a few outstanding products.

The Wells Tool Company had its beginning in 1874, and was concerned with the original John J. Grant tap and die invention. Upon absorption by the Greenfield Tap and Die Corporation, Frederick E. Wells organized a new company, presently the Wells tool Company, which has developed various cutting tools,—such as tap and die wrenches, screw plates, screw extractors and numerous similar items with the principal tool being the patented taper screw for the adjustment of dies so that the teeth of the die are maintained in identical alignment.

The Parts Manufacturing Company, organized in 1940, produces screw machine products to precise tolerances on contract. A recent speciality of the company is the precisely machined and finished parts of aircraft engines, work which requires closely controlled heat treatment together with specialized testing and laboratory equipment.

The Production Machine Company is another widely known Greenfield organization. Its industrial grinders are used in industries the world over. Its machine tools are used on wood, metal and plastics, on large jobs and on small production lines. The leading items among its machines are: grinding, and polishing buffers, sensitive drills, abrasive belts and cutter grinders, surfacing machines and centerless and hand types of polishers. The firm was formerly known as the Blevney Machine Company but the present name was adopted in 1920. The company has always acquired patents of value in its field, a recent acquisition being the patents for the Read precision drilling machines.

The Bicknell-Thomas Company, operating for half a century under various organization names, is now nationally known under

its present title for its production on order of small tools, counterboring machines and spot facing tools.

The Greenfield Steel Stamp Works is an example of similar Greenfield firms whose products and services tie in with the production of small tools by companies specializing in such work. For example, all tools are stamped with the name of the manufacturer. For this work a very hard steel stamp is required and this particular firm makes a line of such steel stamps for marking taps, dies and steel tools of all kinds as well as stamps for soft metals and wood. The production of these stamps requires a high degree of craftsmanship as well as much specialized machinery.

The Rugg Manufacturing Company, a Greenfield firm for one hundred sixteen years, is today famous for its complete line of steel and wood lawn and hay rakes, snow shovels, snow scoops, snow pushers, lawn mower handles, shingling brackets, delivery crates and pressed metal hardware on order for various manufacturing establishments. It also supplies a varied line of semi-finished parts and products of wood and stamped metal to other manufacturers. It also operates a mill producing a complete line of mill work and house finish items.

The New England Box Company, one of New England's outstanding manufacturers in its field, with plants in New Hampshire, Vermont, New York state and Western Massachusetts, has its headquarters in Greenfield. Also its design and testing laboratory is located in the town. The firm makes practically every type of wooden container used by industry and business such as: lock corner boxes, matched shooks, plywood wire bound boxes and shooks, display and fancy boxes, slide cover boxes, hinged cover boxes, bread and banana boxes, fruit and vegetable boxes, shop and tote boxes, cheese, fish and food product boxes, export packages, and fibre wood cleated boxes. During the war, this company supplied tremendous quantities of boxes of all types and specifications to the armed forces for shipping millions of tons of ammunition, military equipment and stores of a multitudes of shapes, sizes and weights.

Rogers, Lunt and Bowlen, silversmiths, is yet another example of the superlative excellence of Greenfield workmen. Lunt silversmiths, particularly in sterling, are widely celebrated for the excellence of their products. While the present firm dates only to 1902, the original organization runs back to 1690 when William Moulton began the production of table silver, both flat ware and hollow ware. The last Moulton silversmith was Joseph, who was born in 1884. Anthony Towle was a Moulton apprentice and started in 1855 as an independent manufacturer with his son, bringing their business to Greenfield in 1890. With the Towles came George C. Lunt, an engraver. Another firm of silversmiths was A. F. Towle and Son Company and in 1902, Lunt Silversmiths purchased the Towle business and equipment. This is the origin of the present organization which today occupies a position of national prominence in the trade.

Starbuck Manufacturing Company is a newcomer to Greenfield and its product, paper draperies, is one of the newest articles on

the American market. Special machines have been installed by the company and, while it is too soon to know how the market will develop, since the company is hardly a year old, indications are that Greenfield has a new business with promise of good development.

Bickford and Currier began as a firm of "jobbers and repairmen" but it has gained such a good reputation for its work that the firm has expanded several times conservatively, and today occupies an increasingly important position in the production of "special machinery".

The du Mont Corporation is an example of the several new organizations which have been attracted to Greenfield recently by the established tradition of skilled workmen and quality production. It is as if the name of Greenfield commands respect for products manufactured in the town. The du Mont firm's product is "Minute Man Keway Broaches", a device which is an up-to-the-minute application of tooling in accordance with the most advanced standards of metal working efficiency. It combines essentially roughing and finishing in one cutting tool, because each successive tooth performs a progressive function, each tooth finishing the cutting accomplished by the tooth proceeding it. In effect, the tool can perform to very close tolerance and leaves the product with a good finish so that final finishing is not required. It is used in the cutting of pulley hubs, gears, couplings, collars, milling cutters and the like.

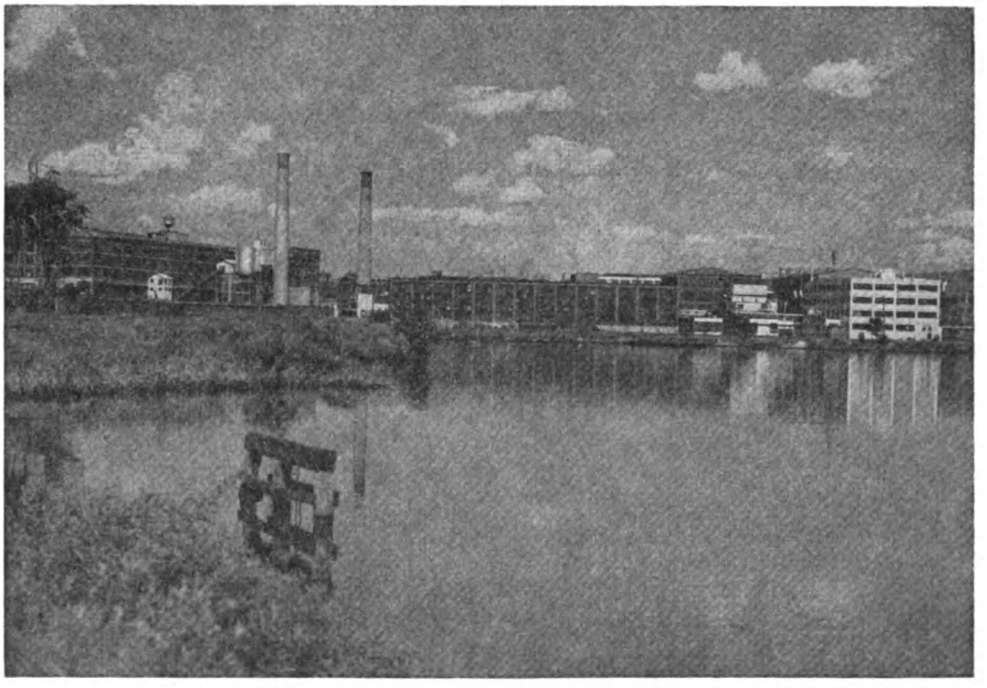
Other Greenfield companies include: the J. H. Smith Company, manufacturers of brushes and cleaning products, the Wesco Electrical and Manufacturing Co., Inc., producers of automotive and industrial condensers, and the Noyes Foundry Company.

PITTSFIELD

When long ago Pittsfield turned from its original business of cultivating the land, and of trading and fighting with the Indians, the first group of industries established included such enterprises as grist mills, saw mills, distilleries and tanneries. Then followed, shortly, various textile establishments. Gradually, through the years, as a result of the exhaustion of natural resources but, more important, as a result of the enlarging economy of the nation, Pittsfield lost most of her early industries. However, several other new activities appeared and so the business and industrial life of the Big Town of the Berkshires has continued. There has been a change but always much more activity has come in than has gone away. In a word, the citizens of Pittsfield and its satellite communities, have always had as much work as was wanted. Pittsfield today is more prosperous and more promising than at any time in its two hundred odd years of development.

For example, in 1940, total value of the city's products at the loading platforms of the factories, was set by the federal government at about fifty million dollars. In 1945 the estimate was set at $103,000,000 and, while statistics for 1948 are lacking, it is generally assumed that with conversion to peacetime products well

established, the total value of production is at least as great if not greater than during the lushest period of the war. This year, city records show, there are 42 active industries in the city. Their products include: bakery goods, bank notes, buttons, clothing, electrical machinery, electrical supplies, parchment paper, paper making machinery, knit goods, leather goods, paper, newspapers, printed materials, office supplies, stationery and textiles.



General Electric Company and Silver Lake, Pittsfield

GENERAL ELECTRIC COMPANY

Most people who have heard of the Pittsfield Plant of the General Electric Company think of it as the place where scientists play with lightning. It is the home of high voltage research and scientists do experiment with the plant's ten million volt artificial lightning generator. Important as this may be, the Pittsfield Works are actually one of the greatest centers of electrical machinery and electrical products in the world. The Pittsfield Works, although but one of the many General Electric plants, which are scattered about the nation, employs 10,000 Pittsfield men and women, uses one hundred seventeen buildings on one hundred eighty-nine acres of land and is devoted all but exclusively to the production of electrical equipment for the distribution of electric power. The chances are, no matter where you may be in the world, if you use electricity, somewhere along the line from the source of power to your motor or lamp, there is a product of Pittsfield functioning.

For instance, the Pittsfield Works produce such things as: transformers which range in size from the "pots" perched on local distribution circuits, to massive monsters in "high line" installations which weigh as much as half a million pounds and control currents of prodigious strength. Other Pittsfield Works products include: lightning arresters, fuse cutouts, regulating equipment, capacitors, high voltage bushings, industrial heating devices, soldering irons, melting pots, space heaters—and, of course, material for the armed forces.

The formation in 1945 of a sixth General Electric operating unit, the Chemical Department, with headquarters on Plastics Avenue, was recognition of Pittsfield's years of contribution to the plastics industry.

For long before plastics articles found a place in every home, every pocket and purse, and almost every factory, one section of General Electric's Pittsfield Apparatus Works had been molding plastics parts for use in transformers and other electrical equipment. Experiments by the chemists of this section led to the development of ever new synthetic materials and consequent new uses for G-E plastics. Molding operations increased to such an extent that in 1936 they were moved to a vacant ceramics plant on the eastern outskirts of the city. Known as the Pittsfield Molded Products Works, this plant at One Plastics Avenue has today become the largest of its kind in the world.

The expansion of General Electric plastics manufacturing facilities in Pittsfield is a progression typical of American industry. Long before World War II, a plant was established to produce the large quantities of phenolic molding compounds used in plastics. When natural phenol, basic chemical of these compounds, became a wartime scarcity, G. E. in Pittsfield erected a new synthetic phenol plant at Plastics Avenue. To speed the development of special plastics parts needed by the armed services and commercial customers, additional chemists were recruited to staff a large and modern laboratory built adjacent to the Pittsfield Molded Products Works. Included in the expansion program was a building where engineers were to devise new methods and equipment needed to produce the materials born in the laboratory.

When production was geared to its highest wartime level in January 1945, the General Electric Company made an organization change of much importance to Pittsfield. The manufacture and sale of all G-E chemical products was coordinated in a Chemical Department with headquarters in Pittsfield.

From offices here, soon came directives and policies controlling operations in ten Chemical Department plants scattered from eastern Massachusetts to western California—plants making all types of plastics; a variety of permanent magnets and other metallurgical materials; synthetic rubber, oils, and greases of a chemical family called silicones; and a host of electrical insulating materials.

In addition to the many problems entailed in developing, manufacturing, promoting, and selling these seemingly unrelated products, the Chemical Department in 1946 assumed responsibility for direction of one of the Federal Government's three atomic energy plants, the Hanford Works in the state of Washington.

The Chemical Department's interest in Hanford culminates a span of growth from a small section molding plastics parts for transformers to a mature Pittsfield industry actively engaged in the diverse fields of chemistry, metallurgy and nucleonics. As this growth has benefited the General Electric Company, so has it benefited Pittsfield by creating one thousand five hundred new employment opportunities, increasing the population, and further enhancing the city's national reputation as a prime industrial center.

However, it is Pittsfield's primary job in the General Electric empire to produce the products which are primarily concerned with the distribution of electricity from generating stations to homes and factories. That the United States is embarked upon a great increase in the consumption of electricity is shown by the fact that some twenty million dollars or more are being spent presently to increase the productive capacity of the Pittsfield Works. Another $2,500,000 has recently been spent in additions to the high voltage laboratory also so that advanced research can be conducted into the problems peculiar to surges of power that equal lighting in pressure and exceed it in volume.

The E. D. Jones and Sons Company is another Pittsfield concern whose products are widely used. The company was formed in 1845 by E. D. Jones, an enterprising millwright who served the factories around the Berkshires as a practical engineer. If anyone wanted a machine, they simply told Jones what they wanted the machine to do,—and he built the machine. Gradually, Jones specialized as industry became more complex, in servicing paper mills but by 1900, the firm found that it must still narrow its field because of rapidly increasing complexity. So the Jones Company began its present production of specialized paper stock preparation equipment. Even so, their list of present products includes a dozen major units of paper making machines and many smaller items which are paper-making accessories. Their most important machine is the Jones-Bertrams Beater which weighs about thirty-five tons and prepares fibers for the actual paper making machine. This beater, which is built of stainless steel in part, so as to resist corrosion, is largely automatic because necessary economies of modern operation require machines that do not need human attendants. At the opposite end of the Jones' list of machines, so far as size is concerned, is the Jones High Speed Refiner which weighs only about two tons and yet processes just about all kinds of materials for making paper stock. About three hundred persons are employed in Pittsfield by the Jones company.

One of the big names in paper in America is the Eaton Paper Corporation. Unlike many expanding manufacturing organizations

that buy up subsidiary plants and operate them in their original communities, when the Eaton company buys out a manufacturer, it brings the plant home to Pittsfield.

The Eaton Paper Corporation, which now employs some seven hundred workers, stems way back for its ancestors to the very first paper makers in the Colonial days. The actual beginning of the present company was in 1806. Paper was then made by hand and the Eaton firm continued to make its papers by hand for more than sixty years. Entering the stationery field in 1893, the firm has continued to be a leader in this highly competitive and extremely shifting style field. Fashions in stationery seem to shift with the winds, yet the Eaton firm has led the parade for these many years. Eaton does not make paper at its Pittsfield plant but has its high grade papers made to specifications by various mills in Massachusetts. Eaton converts this paper into the classic and modern types of stationery. More people are writing more letters today than ever before in history and the Eaton firm finds that people are displaying a decided preference for decorated paper and envelopes,—what is known as "personality paper" in the trade.

Recently, Eaton has purchased and brought home to Pittsfield a Fine Leather Accessories Division and the Nascon Products, Inc., both formerly of New York, and the Whiting & Cooks stationery converting plant, formerly of Holyoke. The Fine Leathers Division is a crafts department which makes, by hand, de luxe leather desk sets, leather waste baskets, leather book ends and so on. Associated is a Printscript department which is devoted to the processing of individual orders for personal stationery.

The Nascon Products Company specializes in producing under Eaton such things as its famous "Week-at-a-Glance" book which is a sort of de luxe desk calendar in book form. Individually designed by famous artists and produced to meet the most exacting standards, these books lead the parade of similar products. Other products include address books, memoranda books, guest books, card and gift records, household budget books, expense books and so on.

The A. H. Rice Company, established in 1878, has been spinning silk thread and also making silk braids. Rice silk thread is used very widely and the name is one of Pittsfield's outstanding bulwarks. Through the years, Rice has added threads and braids of other materials, such as cotton, rayon, mohair, wool, cellophanes, tinsels, and recently, nylon. This nylon business, which promises to become the most important of all, began during the war when Rice produced for the armed services quantities of nylon thread and nylon parachute cord. The braids are used in many fields, for army and navy uniforms, for baby bonnets and for trimming caskets.

The Elmvale Worsted Company, established in 1928, and its associate organization, the Elmvale Dye Works, founded in 1931, have grown from less than one hundred employees to a present total of about six hundred fifty men and women. The two companies manufacture quality worsted yarn primarily for the weaving trade, although

some knitting yarns are also manufactured. The company enjoys the patronage of some of the nation's leading fine men's wear weaving mills.

The Boston Auto Gage Company, well known throughout the world, came to Pittsfield in 1925. Their original product is known as a direct reading, magnetic liquid level gage. After coming to Pittsfield, the company concentrated on the production of gages for transformers, oil burners, ships, stoves and aircraft. During the war the company produced many thousands of gages for the armed services, a job which the company also completed during World War I.

Pittsfield Coal Gas Company was organized in 1853, and ever since that time it has not suffered any interruption in its production of carbureted water gas which serves the surrounding area. For some 15,000 customers, the firm's eighty-five employees produce about two million cubic feet of gas daily.

The Wyandotte Worsted Company, a State of Maine corporation, with plants in Maine, New Hampshire, Connecticut and Pittsfield, is normally a producer of woolen fabrics which are sold to the manufacturers of women's suits and coats. During the war, the company engaged in the production of blankets for the armed services. The company follows the entire process of production of the cloth from the raw wool through all the weaving, dyeing and finishing steps to the delivery of the cloth to the manufacturers of the garments.

The Berkshire Woolen Company is one of Pittsfield's industrial leaders. It started its present organization about thirty-five years ago and has developed rapidly into one of the nation's leading firms in its field. Its plant is considered one of the most beautiful as well as efficient textile mills in the entire nation. From the beginning, the Company has confined itself to serving only the best class of trade, for it has determined that there is always a good market for quality merchandise. Thus the company has always maintained a full level of employment and also enjoys the distinction of having a remarkably low labor turn over. Its employee relations program is considered a model for the textile industry.

The company's products feature the highest grade of fancy woolens. For ladies' wear, they use the trade mark "Cerey" which is formed by the last letters of the words—fabric, style, color, vogue and quality. Their men's wear fabrics are trademarked "Berkshire". The company, which produces both light-weight and heavy-weight goods, takes scoured wool and carries it through all the processes of dyeing, picking, carding, spinning, warping, weaving, sewing, finishing and inspecting to the final delivery of perfect fabrics. During the war, the company produced quantities of thirty-two-ounce Melton olive drab for the Army.

The Berkshire Sheet Metal Works, coppersmiths, produces blowpipes, ventilators, metal garages, cornice conductors, copper and tin roofing, eaves troughs, metal ceilings, sky lights and other associated products.

The Berkshire Gravel Company manufactures just about anything in the line of sand and gravel and cement, including broken stone, asphaltic concrete, transit-mix concrete, asphalt paving and washed sand and gravel.

As a final example of the flexibility of Pittsfield's industries, there is the May Engineering Company, a comparative newcomer. This firm, which is self-described as a service shop, actually provides complete enginering service on call for any factory and also produces special machines and provides special tooling on contract. In essence, it is a return to the old-time Yankee jack-of-all trades in that, while highly modern, it undertakes to do just about any type of industrial engineering.

WESTFIELD

It is said that once this Berkshire city, single-handed, whipped the world. It did—for this town produced whips that urged horses to greater speed and labor wherever horseflesh was used. The auto ended all that and most Westfield whip factories turned to other fields —and very successfully, too, thank you. There was a time when the city was famous for its bicycles, too. However, today, the city is solidly based upon an excellent diversification. For example, Westfield produces many things all the way from greeting cards to textile machinery, from doughnuts to fishing tackle. The industrial category in fact breaks down into: steam boilers, bicycles, textile machines, thread, fishing lines, abrasives, brushes, bricks, plastics, decorated metal products, grinding wheels, tools, nameplates, hardware, boxes, electric motors, trap rock, gasoline pumps, greeting cards, foundry products, factory built homes, envelopes and various paper products. It is estimated that the dollar value of the city's annual production, at the factory, is about thirty millions.

The Westfield Manufacturing Company is the firm that gave Westfield the name of the "Bicycle City," a title that, during the "bike" age really meant something. Incidentally, it seems that the bicycle, after going into the doldrums to a degree, shows signs of becoming widely popular once again. The Westfield Company is today the oldest manufacturer of bicycles in America, and by all means, the most famous. In 1877 Colonel Albert A. Pope, retiring from the Army, began manufacturing "bikes." His tradename was the "Columbia". Soon after 1900, "Columbia" moved into its present Westfield home and since then has continued production. Its present payroll lists about seven hundred names. During World War II, the armed services purchased 82,000 military bicycles that carried the "Columbia" name but the Westfield Manufacturing Company accomplished much more military production than that. The actual production figures show that 182,543,201 individual pieces of material were manufactured for the armed services. Included in this total were more than a million thirty-seven millimeter shells, more than a million incendiary bomb bodies, more than eight million complete aircraft and tank bearings, as well as many hundreds of thousands of

such things as scabbards, parts for British Enfield rifles, hand and rifle grenades, and various fuses for Army and Navy shells and Chemical Warfare Service chemical bombs. A top secret during the war but now public property, the company also produced about a million and a half "bazooka" rocket projectiles. About eight hundred people are presently employed at the plant.

The H. B. Smith Company, the oldest major industry in Westfield, was founded in 1853 as a general foundry and stove manufacturing plant. This company was one of America's pioneers in the development of steam and water central heating systems for both residential and commercial use. The company today takes the basic materials of pig iron, coke, sand and the rest and turns out the completed cast iron boilers. Its residential boilers are widely known but the Smith Company is most famous for its "Mills" boilers which are widely used in industrial, commercial and institutional buildings everywhere. During the war Smith boilers were in great demand; one order alone for heating equipment required seventy freight car loads for delivery.

The Foster Machine Company is world known for its textile winding machines. For nearly sixty years the Foster company has made many important contributions to textile machines. Included are the Foster knitting cone and special devices for use with rayon, nylon, glass or any fiber from which textiles can be made, as well as the standard wool, cotton and silk. Its staff of some five hundred and fifty skilled workmen are now busy with a backlog of orders, piled up while the company was busy during the war turning out quantities of ordnance parts for the Army and Navy.

The American Abrasives Company grew out of the need for abrasives with which the grind lenses and prisms during World War I. The war with Germany then shut the world off from the German production of optical parts and in particular from the abrasives used to shape glass to precise forms. The American Abrasive Company was successful in meeting the need for these highly specialized products. Indeed, it repeated its outstanding performance in civilian production and during World War II again made a significant contribution to the war effort. The company's abrasives, which go as high as two thousand six hundred microns in fineness, make possible the smooth cutting and high polish so necessary to the efficient performance of optical instruments. The company is said to be the only manufacturer of corundum in America. While it makes about three million pounds of the substance each month, it employs not a single salesman to sell the material. The reason: it has only forty customers who are optical firms and abrasive wheel manufacturers.

The Old Colony Envelope Company, operating one of the largest such plants in the world, produces something like 762,000,000 quality items a year and yet so far has failed to meet the demand for its products. These products include: wedding, social and business announcements, text and booklet envelopes for direct mail advertis-

ing, bond and writing envelopes, air mail envelopes, correspondence stationery, greeting card envelopes and papeteries.

The United States Line Company, actually the United States Whip Company legally, traces way back to Civil War days when there were fifty-five companies in Westfield making whips. The United States Whip Company was formed in 1893 to absorb most of the small whip companies, and it turned out at that time about eighty-five percent of all the whips made in the world. When the whip business ended, the company turned to making fish lines. The company now makes two kinds of lines, braided and twisted. Silk and nylon are used for bait and fly casting lines; casting lines are braided. The lines are produced in great variety, ranging from six pounds in strength to forty-five pounds. During World War II, the company turned to military production, making nylon and silk parachute cord and surgical sutures. The company is proud of its employees, many of whom have spent their lives in its factory.

A new addition to Westfield's diversification is the Anchorage Homes Corporation. It is the largest plant in the world devoted solely to the production of quality mass production homes by the assembly line method. It plans to increase its initial production of sixteen homes a day to about fifty a day, when it will need nearly two thousand workers.

The W. Warren Thread Works began in business to produce the special glazed thread used to wind the body of the famous Westfield whips. This was in 1864. When whips passed, the Warrens found that autos needed glazed thread too, for winding the wires of ignition systems and so the company has continued, turning out today more than 2,500,000 pounds of cotton thread and glazed yarns a year in various forms that number in the thousands. Their threads are widely used for such things as the most delicate laces to the stoutest of cords for the merchant marine and the Navy. The firm has had the guidance of three generations of the Warren family.

The Colonial Art Company began in business as manufacturers of side combs, barrettes, bow clasps and various types of ornamental combs,—all for use in women's hair. When, about 1919, women started to wear their hair short, the company shifted from the comb business to a new field, the production of sanitary and washable tags for the marking of prices on meats, vegetables and other products in retail markets. Today, the company's line of washable tags is the most complete in the world and are used almost everywhere.

Anderson and Sons, who came to Westfield in 1939 from Springfield, began as producers of instrument dials, panels and plates. During the war it branched out into associated fields and now is producing automatic devices of the highest accuracy as well as marvelous automatic operation.

Stanley Home Products manufactures household chemicals and household and personal brushes. The Kellogg Brush Manufacturing Company, another Westfield brush company, produces a wide variety of brushes: scouring, vegetable, waffle iron, bottle, dish, bath, radiator,

comb, clothes, lamp shade, upholstery and so on over a field almost unlimited. Its brushes meet every need.

Two grinding wheel companies make Westfield their home. There is the Vitrified Wheel Company. Organized in 1872, this company makes hundreds of different sizes of grinding wheels in various shapes and forms. Some wheels are but a quarter of an inch in diameter; others are a yard across. The Westfield Grinding Wheel Company produces about ten thousand wheels a month which are chiefly resinoid and shellac cut-off wheels used in cutlery grinding. It also produces a complete line of grinding wheel dressers, cutters and diamond tools.

The Westfield Metal Products Company is important in industry but never mentioned in retail trade. It makes nuts for the lock industry, for radio manufacturers and other industries. Its nuts, which are milled from bar stock, are made to specification. Some nuts are huge; others so small that they are just about visible to the eye.

It is generally thought that whips are no longer used. They are and Westfield still makes them through the Cargill Cleveland Company. The oldest whip manufacturer in the county, this firm makes whips for farm use and for race tracks as well as polo whips, riding crops, and stock whips.

The Precision Tool and Manufacturing Company makes precision tools, parts and machines, such as: gauges, special tools, jigs and fixtures, instruments, aviation parts and general tools.

For final examples of Westfield's productive genius, the Stevens Paper Mills produce Kraft capacitor tissue and coil insulation for electrical use and The Westfield Tool and Die Company manufactures gauges, jigs, fixtures, dies, and special tools and machinery.

III

Conservation in Western Massachusetts

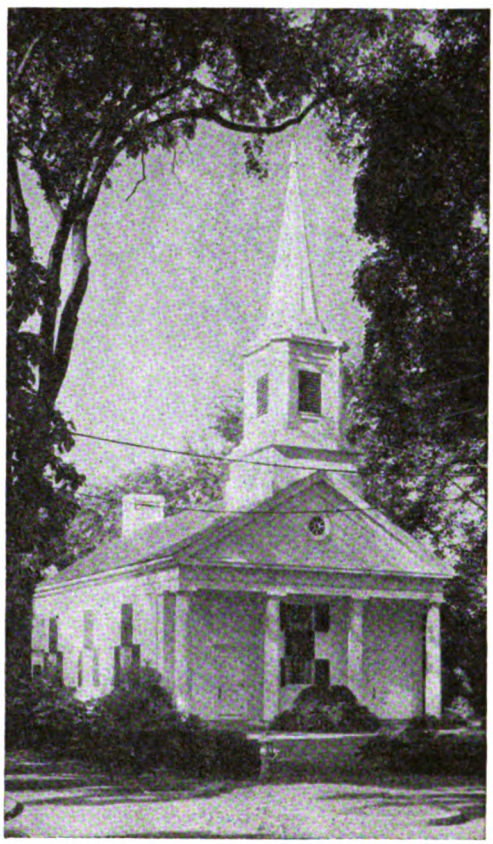
Conservation, a much abused phrase in modern times, is apparently concerned chiefly with the preservation of our nation's natural resources but, in ordinary usage, means the management of our wild life and their natural background of forest, lake and stream.

Because of its peculiar circumstances, in Western Massachusetts conservation has been very largely the re-development of a forest cover. This was only to be expected. Roughly, Massachusetts is divided into three parts—one-third cities, one-third farms and one-third forest. Of the forest areas, by far the larger in sheer bulk is the Berkshire Hills. The hills were once heavily felted with forest,—pine, spruce, hemlock and various hardwoods, such as maple, beech and oak. Only in the river valleys, where floods kept the trees down, could the settlers find openings on which to practice their major means of subsistence, agriculture.

When more families came, the only way to farm was to remove the forest. Fire was the quickest and simplest means and timber then worthless but now priceless, went up in smoke. For the first hundred and fifty years, this was not of importance, because the area

of forest was so tremendous. After the Revolution and until the time of the Civil War, so many families came into the hills and so many wood-using industries sprang up that, within two generations, the forest cover of the hills was gone.

Under the intensive agriculture practiced, this meant inevitable erosion and loss of the productive top-soil. Only when covered by forests and their heavy carpet of duff, can hillside top-soil remain in place. Exposed to drying sunshine and to erosive winds, it inevitably flows away with the heavy spring rains.



(Courtesy of Pioneer Valley Association)

Typical New England Church at Greenfield

Actually, it has been demonstrated, the hills are not primarily an agricultural area at all. The soil and the climate are ideal for one crop—trees. Trees of many valuable species will grow rapidly in the Berkshires—and a crop of timber is both profitable and a highly necessary production. Home grown wood has an eager market waiting.

What has happened to the abandoned acres once farmed? It takes fifty years to grow timber under modern sylvicultural practices, perhaps a century if the woods are left to their own devices of ruthless competition for light, air and water.

Just a glance at the hundreds of thousands of abandoned farm acres was enough. They were growing up to a cover, of course, where fire did not bare them again and again. But the cover was practically worthless from a commercial viewpoint. It consisted of scrub, largely old field birch, which is not worth the cutting, even for fire wood. Diseases of all kinds were flourishing in the scrub and thus the regular procession of the forest trees from weeds to birch through hardwoods to spruce and pine was being hopelessly delayed.

Obviously the idle acres had to be planted with commercial species and, once planted, placed under modern forest management. Obviously the job was one for the state—and legitimately so. The reason was that here were all these idle acres which could not and would not produce enough income for taxes on even a minimum valuation of five dollars an acre. So the lands were abandoned and, reverting to the town, became a public liability instead of an asset.

It was a long battle, the fight to convince the General Court that the state should go into the forestry business and thus reclaim the million and a half idle acres of Western Massachusetts woodlands. But in 1919, authorization to buy 250,000 acres was obtained at a cost not to exceed five dollars an acre and in 1936, the Court gave permission to the Department of Conservation to add another 500,000 acres.

Court House and Library, Pittsfield

Of course, only a fraction of this vast realm has actually been put into State Forests—as the units are called, but a good beginning has been made, particularly in the Berkshire Hills.

There are now some thirty State Forests in the Berkshire area. These are: Arthur Wharton Swann, Bash Bish, Beartown, Campbell Falls, Clarksburg, East Mountain, Mohawk Trail, Monroe, October Mountain, Otis, Peru, Pittsfield, Sandisfield, Savoy Mountain, Tolland and Windsor—to list the more important.

October Mountain may be considered typical. Not only is this magnificient forest area producing good timber, which is being managed so that, in effect, it is a production line which will produce timber forever on an annual basis, like a crop of potatoes, but it is being put to other uses. It is not only a wild life preserve, within limits; a great reservoir of water; but it is also the largest single

recreation unit in the State. It may be a commentary upon civic attitudes but the fact remains that these State Forests are not being sold to the taxpayer so much upon their real reason for existence, the reforestation of otherwise worthless land, but rather as wild life farms to restock the region for the sake of hunters and fishermen, and also as recreation centers where in summer people can come and camp out, vacation or just picnic while in winter they can come and ski down the hillsides to their hearts' content.

The prime mover back of the establishment of the State Forest was the Massachusetts Forest and Park Association, Harris A. Reynolds, secretary. In addition to some 40 years of fighting for the establishment and the proper management of the state forests, Reynolds has also initiated steps in conservation of the woodlands.

The first of these is the establishment of the town or municipal forests. Reynolds went to Germany where the town forest is well developed and came home and went to work to persuade Massachusetts cities and towns to establish their own forests. Take idle lands, either those owned by the town on tax titles or lands that can be acquired cheaply, he argued, and plant them to forests. From the forests will come a perpetual stream of timber and various forms of wood for town use or the products may be sold for income and so reduce the tax rate. Also, with a forest right within the town limits, people will have right at their back yards both a laboratory where children can learn conservation and the natural sciences first hand, while their elders can have pools in which to bathe, streams in which to fish and camping and picnic grounds within a few minutes' walk.

The idea in the past twenty years has taken hold. In the Berkshires, especially, the town forest has found a firm foundation. Russell, for example, finds its forest now produces nearly fifty percent of the annual tax levy and it is hoped that within a few more years revenue from the forest will pay all town costs and leave a surplus so that it is possible the citizens may receive dividend checks instead of tax bills.

It is interesting that the town forest idea, which has included so far about one hundred fifty towns and cities in the commonwealth, has been taken up by the United States Forest Service and pushed on a national scale so that as of the present there are something like three thousand municipal forests in the United States and the movement is only well launched.

This is conservation at its best, for it gives citizens who pay taxes a local demonstration of the values of woodlands properly managed instead of being neglected to grey birch, wild cherry and blueberry bushes.

The third step in woodland conservation being spearheaded by Reynolds' leadership is the development of the farm woodlot through the New England Forestry Foundation, a non-profit educational institution. This organization was established to demonstrate that by proper management the farm woodlot can be made a source of income rather than just a waste part of the farm. In the aggregate the farm

woodlot makes up much of the forest area of the state but no one bothered with them because, despite the best efforts of state and the Federal governments to persuade farmers to put their woodlots to work, no one was persuaded. The farmers, who are busy and by necessity skeptical persons, needed to be shown, not told, that their woodlots could pay profit. So the New England Forestry Foundation was formed with the idea of establishing demonstration centers about the region to show the farmers not only how to make their woodlots pay but to prove to them that they did. The plan has taken hold very well but it has rather leaped away from the original purpose in that farmers and other woodland owners are employing the foundation to manage the woodlots and other holdings on a percentage basis. It costs the farmers nothing to have trained men come in, cut out the wolf trees and the mature trees, to make up a schedule of cutting, to carry out thinning and planting. This is so because the foundation's sales force obtains so much more for the woodlot products through their experienced marketing than the farmers can individually that the extra profits more than pay the expense.

This extension of modern forest management into private forestry is regarded as highly important because, large as the state forests are, the private holdings are still very much larger than state owned woodlots. Once private forestry can be adequately practiced and generally established then the battle of conservation will be won, insofar as woodlands are concerned.

While other forms of conservation are being pushed, by government agencies for the most part, stream control, flooding dams, side-hill contour plowing, cover crops and all the rest, there yet remains another field which probably will never come within sight of the public purse. This is the matter of preserving the beauty of the Berkshires. It does seem odd that where the beauty of the hills is the major tourist attraction, the reason for the very lucrative trade in summer vacationists and winter sports enthusiasts, that the beauty of woodland and stream is left to private interests.

However, something is being done.

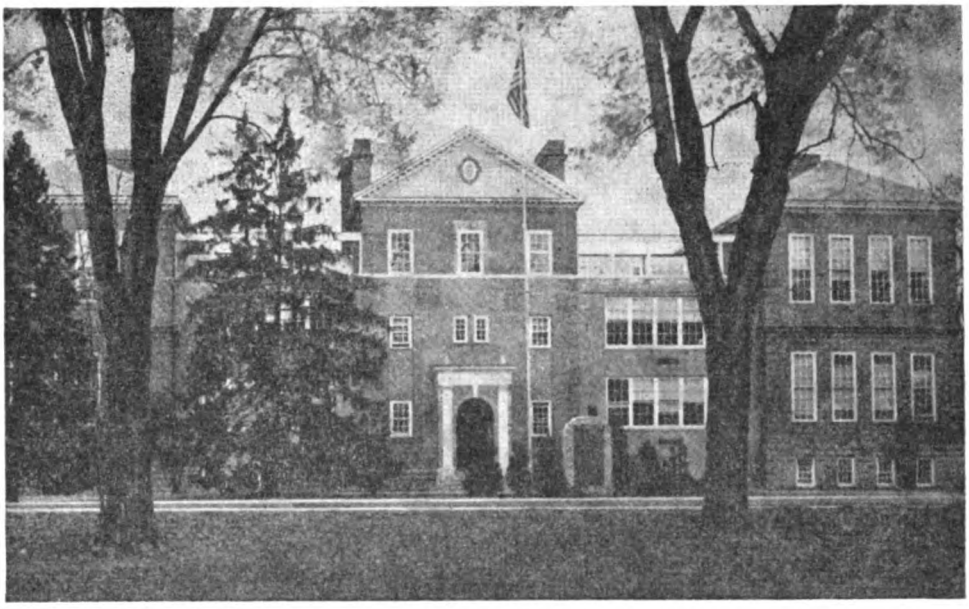
First, the work of the Trustees of Public Reservations is typical. Despite its name, this is a private organization supported by contributions from interested people. It has no governmental associations at all. It is "a voluntary trust to preserve for public enjoyment the beautiful and historic places in Massachusetts".

Founded in 1891, the Trustees, the first such organization of its kind in the world, and the parent of the famous National Trust of Great Britain, has already accomplished a great deal and is now working at various spots in the Berkshires to save particularly beautiful spots, such as waterfalls, groves of virgin timber and the like.

As an example, there is the Trustees' recent acquisition, with the help of such local people as Walter Prichard Eaton, Miss F. C. Andrus, Edward F. Belches, Mrs. William A. Berridge, Mrs. W. Taylor Day, Mrs. Lawrence K. Miller, C. A. Weatherby, Robert K. Wheeler and others, of Bartholomew's Cobble in Sheffield. This cobble, which

is an old word meaning an outcrop or island of stone, is a highly beautiful spot which was in danger of commercial exploitation.

It is a lump of limestone, about twenty acres in area, which rises sharply from the alluvial bottom lands of the Housatonic River. It has many outcroppings of the basic stone, grey with green and bronze patches of mosses and lichens, and there are velvety stretches of lawn between the little summits. It is well shaded with hemlocks and other trees. However, the particular value of the cobble, aside from its



High School, Great Barrington

own beauty and the grace of the wide landscape surrounding it, is the wealth of wild flowers and ferns which carpet it. In fact, it is a real herbarium of the native flora.

So far, more than five hundred species of plant material have been scientifically cataloged. From early spring until late fall there is not a day when the cobble is not brightened with flowers of one kind or another. It is a haunt of the wild birds of the area and an age-old Mecca of contemplative humans seeking a quiet place to rest. Gardeners find it of compelling interest for, with the recent popularity of rock gardening, the cobble, which is itself one huge natural rock garden, presents an infinite variety of examples of how such a difficult type of gardening should be planted and planned, as well as examples of the type of plant material which prospers in the Western Massachusetts climate.

Botanists are particularly interested in the plant material for it demonstrates the natural survival of plant material in the hills, as well as being the home of many rare plants. Among these of partic-

ular interest is Scott's spleenwort, a rare natural hybrid fern which has appeared and vanished many times in botanical research. This hybrid fern can come about only through unusual combinations of circumstances and can continue only within very narrow environmental limits. It is flourishing on the cobble and probably, now that the spot is permanently protected, will continue to flourish—one of the very few such places in all America.

Although gardening seems a long way from conservation, as applied to farms and forests, it still has much to do with the conservation of the beauty of a region. Particularly in the Berkshires, it is the gardening that makes for the greatest beauty, the natural setting of purple hills, winding rivers and tumbling streams granted. The Berkshire gardener works under difficulties. The growing season is comparatively short—late spring frosts and early killing frosts in autumn greatly curtail his choice of plant material. Then the severe winter temperatures, when the mercury often plunges well under the zero mark, still further dictates a choice of only the hardiest of shrubs and perennials. Heavy snows must be considered and so must the tempestuous winds which accompany the drenching downpours of the summer thunderstorms.

But even within these limits there are a host of things available to the Berkshire gardener. The old favorites of grandmother's time, lilacs, iris, poppies, forget-me-not, tulips, daffodils, violas, hollyhocks, chrystanthemums and many more all flourish mightily in the hills. However, modern horticulture has greatly enriched the gardener's stockpile and his choice of material has become so great as to be actually embarrassing. Further, to grow many things successfully, particularly new hybrid varieties which are appearing so numerously these days, along with a bewildering arsenal of weapons with which to fight bugs and blights, the amateur gardener, however well intentioned, is in a difficult position.

To help maintain gardens properly, and to advance the knowledge of horticulture so that the gardens of the Berkshires may continue to add their final touch of beauty of the natural grace of the hills, various organizations are working to help everyone. The various garden clubs are very active; particular mention may be made of the ladies of Lenox, Richmond, Great Barrington, Pittsfield and Alford, as well as such organizations as the Massachusetts Horticultural Society, the Lenox Horticultural Society, the Stockbridge Grange, the Laurel Hill Association, the Stockbridge Parent Teacher Association, the Tuesday Club, the Stockbridge Library and the Garden Club Federation of Massachusetts.

However, the gardeners of the hills all felt that they needed a local horticultural organization which, upon a practical basis would show by actual demonstration, as well as by books and lectures, what gardening could accomplish under local conditions. So, in November of 1934, the Berkshire Garden Center was established at Stockbridge.

A. Kenneth Simpson was appointed the director and, thanks to his continued interest, plus the abiding support of such women as Mrs. Bernhard Hoffman, who gave the land and buildings, in the past fifteen years this organization has established one of the great focal points of horticulture in the United States.

As constituted today, in addition to the library, the center operates sixteen major features: the trial gardens of annual and perennials where varieties of such plants are grown to discover their value to the Berkshire region; the rock garden, which is both a model and an experimental planting; the wall garden, where plants suitable for providing a succession of bloom are grown as demonstrations; a native shrubbery planting to demonstrate how effectively native woody plant material may be utilized; a daylily project, where about seventy varieties of the *Hemerocallis,* so rapidly skyrocketing into favor, are being grown; a perennial border, where the old standby herbaceous perennials are being grown together with new varieties as demonstrations; a shady garden, where acid loving plants and ground covers which will grow where grass will not prosper, are being exhibited; a dwarf apple orchard, where the new dwarf apple trees are being demonstrated to show how high quality fruit may be grown on tiny trees easily cared for; a grape arbor, where grapes that will withstand the short growing seasons and hard winters are on parade; an herb garden, a terraced slope with a very large collection of carefully named varieties of herbs; an herb house, where the utilization of herbs in cookery and the other arts is demonstrated; a demonstration room devoted to various types of garden accessories; the main building where, in addition to the horticultural and garden library, are located the assembly room for weekly lectures, a display room for exhibitions and flower shows, a file of nursery catalogs, a collection of garden magazines and bulletins, and the lending and reference book collections; the compost pit, where a demonstration is carried along of turning leaves, weeds and other organic refuse into highly valuable soil conditioning substances; the sunheated plant pit where tender plants and bulbs and flowering shrubs are flowered through the winter as if in a heated greenhouse; and, finally, the vegetable garden, where the standard as well as novel vegetables are grown along for everyone to see.

In short the Berkshire Garden Center is not only an extensive source of information and inspiration but it is a large experimental plant as well. In addition it is a place where gardeners can come and see what is what in gardening, what will do best under Berkshire conditions and, finally, to learn how to design their own gardens, how to plant them and what to plant.

Probably no other single organization has accomplished more for the beautification of the Berkshires and Western Massachusetts than this remarkable institution.

IV

Education in Western Massachusetts

Education in Western Massachusetts has been of high caliber even in the remotest sections of the hills. As distinguished from other less independent sections of the nation, public education, especially in the higher brackets, has had a dominating tendency towards private institutions. In the minds of the Berkshire people, public-supported and compulsory education was well enough and probably a good thing at elementary levels but, for real education, in academies and colleges—well, that was not to be interfered with by any organization, political, religious or whatever. If education is to mean anything, it must be free!

Hence, in the Berkshires the nation has one of the outstanding strongholds of the comparatively small but very vigorous and important liberal arts college supported entirely by tuition and, more largely, by endowment.

Before listing modern educational institutions in the Berkshire Hills, there should be a glance taken back a century or more when the present system was being established. Probably the best way to do this is to mention a few great teachers and administrators, for after all, a school of any kind, like most institutions, is but the substance or the shadow of the individual who gave it life, either in the beginning, or somewhere along its route of development.

For example, in the early days, Western Massachusetts needed doctors; needed doctors who were both adequately trained and hill-men too so they could endure the rigors of winter traveling. The need discovered the man, as is often the case. Dr. Henry Halsey Childs, with of course the assistance of other men, established in 1823 at Pittsfield, the Berkshire Medical Institute.

Naturally, as medical education increased in complexity after the Civil War, as terrifically expensive laboratories, libraries and equipment became ever more necessary, the hill school could not compete with the great medical schools. Hence, the Pittsfield medical school could not long endure. However, in the fifty-four years of its life, it did great service. It trained and sent out to serve a host of physicians, some of them distinguished nationally. It is perhaps most significant that Dr. Childs founded the school while still a comparatively young man, that he devoted most of his long life to its operation, and that a year after Dr. Childs died, the school closed its doors in 1867.

As another example, mention must be made of an outstanding personality in the type of education which has become essentially the permanent field of the Berkshire, the small, liberal arts college. Amos Eaton, a graduate of Williams College, class of 1799, Williamstown, was that rare and fortunate person, a happy teacher.

Eaton devoted his formal career to teaching geology and botany at Williams College but he also lectured widely throughout Massachusetts, Connecticut and New York. His was the genius of not

merely giving adequate instruction to his students but also of communicating his vital spirit; he stimulated not only their intellects but their entire lives. For just two instances, Eaton was the man who aroused Mary Lyon, a student who went on in later years to found Mount Holyoke Female Seminary—one of the first colleges for women in America. Another pupil, Stephen Van Rensselaer, did not become a teacher but he did give Eaton funds with which Eaton established an outstanding modern college, Rensselaer Polytechnic Institute, at Troy, New York.

One of the most significant demonstrations of Eaton's ability came in 1817, when his botanical textbook, *Manual of Botany,* was published. This book, one of the nation's first manuals, was not published commercially. Instead, Eaton's students at Williams voluntarily petitioned the college authorities for permission to publish Eaton's lectures on botany, promising to find the necessary money amongst themselves. The college agreed. The students found the funds—and for a monumental testimonial that few if any teachers have ever received, Eaton's book was printed.

It was a testimonial not alone to Eaton's personality but also to the meaning of the liberal arts college. Today, the same spirit still continues between the Connecticut River and the New York State line. While there are actually not many such institutions in number, in proportion to the small area involved, the saturation point is very great.

Amherst College, Amherst—In its lovely, elm shaded town, with its old buildings set apart by gracious green lawns, Amherst is one of America's most widely known of the small New England colleges. Just as in the case of most New England colleges, it was originally established, in 1821, for the purpose of training young men for the ministry. And, just as happened with most other colleges in the area, it broadened its courses until it became the type of the liberal arts institution. "It has preserved to this day the idea of a liberal as opposed to a vocational training". As of date: the president is Stanley King, A.B. Amherst; A.M. Harvard. Its student body, eight hundred forty; its faculty, eighty; its endowment, $11,000,000.

Mt. Holyoke College, South Hadley—Established in 1837, this women's college has long held a high position in its field, thanks to the impetus from its founder, Mary Lyon. A great amount of prejudice was mastered in the beginning, for the people a century or more ago could not see the value of educating girls who "were just filling in the years until they married". Times have changed, somewhat, and Mt. Holyoke now has an endowment of $5,482,338 and its four year course leading to the standard academic degrees are widely recognized by graduate schools the country over. With about one thousand members of its student body and a faculty of some one hundred thirty, led by Roswell Gray Ham, Ph.D., University of California, the college offers the old fashioned liberal arts courses of study with emphasis being placed, perhaps, on training in education—for which a master's degree is offered.

(Courtesy of Pioneer Valley Association)

Greycourt Gates and Administration Building, Smith College, Northampton

SMITH COLLEGE, Northampton—A school for women, Smith has grown greatly since its establishment in 1871; its present student body is 2,083 and its faculty, 251. It offers the standard bachelor and master degrees in arts and also the usual doctor of philosophy degree. Its endowment is given as $6,361,000 and it has an alumnae of 17,389. Dr. Herbert Davis is the president. Smith also operates an associated school, The School for Social Service, founded in 1918 to train young women of graduate standing for various social service professions, particularly in the field of psychiatry. Smith itself gives young women "such knowledge of the world and of thought, and such appreciation of artistic and ethical values as will develop their best potentialities . . .".

STATE TEACHERS COLLEGE, North Adams—This is a state college, maintained by the Commonwealth of Massachusetts to train teachers for the schools of the state.

STATE TEACHERS COLLEGE, Westfield—This is another state college, founded and supported by the commonwealth to train teachers.

WILLIAMS COLLEGE, Williamstown—Founded in 1793, Williams has remained by choice a typically small New England liberal arts college. Its enrollment is limited to about five hundred although its endowment is about $11,000,000. James Phinney Baxter, Ph.D., directs the faculty of sixty. Williams was originally established as a free school in 1791, but became a college two years later. Unlike most New England colleges, it has never had any close association with any religious organization. In its development, it has followed closely the ideal of the independent liberal arts college. It offers the two standard degrees of bachelor and master of arts.

UNIVERSITY OF MASSACHUSETTS, Amherst—For many years known as Massachusetts Agricultural College and then as Massachusetts State College, the venerable institution has recently become the University of Massachusetts. Much of this recent development has been the work of the recently resigned president, Dr. Hugh P. Baker. "Mass Aggie" has suffered greatly from competition. Founded as one of the land grant colleges, as many such institutions were, the little school found itself with no need to teach the sciences, for the Massachusetts Institute of Technology, intimately associated in its founding, did that marvelously well. As for the liberal arts, Harvard, at least for its first two centuries, more or less of a state institution too, took care of that department very well, indeed. So, there was little left for the state college to teach but agriculture. Of course, in modern times, with the growth of higher education, little "Mass Aggie" found a place for both the sciences and the arts and so the present-day university came into being. This development is too recent for evaluation but under the leadership of the new president, Dr. Van Meter, it is likely that "Aggie" will win for itself a constantly increasing importance.

If "Aggie" has been small, the institution has by no means been second grade. Its faculty has always been superior, and its plant, comparatively, has been adequate and maintained to meet the

modern tempo. More or less, it has been handicapped, however, by the reluctance of the General Court to provide funds for expansion. Ever since 1862, when the Morrill Act endowed colleges for technical training in every state, the Massachusetts Legislature has been lukewarm towards the institution. The reason is, of course, the old fault; the eastern cities pay the bulk of the state taxes and also, the bulk of voters live in the eastern third of the state. None the less, the college, developing from four teachers and forty-seven students in 1867 has constantly sent out a solid stream not so much of farmers, but of business men and scientists who have spread all over the nation and contributed much to this country's development through their leadership.

American International College, Springfield—Unlike most New England colleges which have drifted away from their original religious training purposes, this college was established in 1885 for the specific purpose of giving a religious background to all its teaching. "This is a Christian institution. It could not be otherwise and remain true. . . . to its founders. . . . A sound religious faith is basic to the obtaining of a truly liberal education". The college has a student body of three hundred eighty-two and a faculty of forty. It offers bachelor's degrees in arts and sciences and in business administration. It is co-educational and non-sectarian.

Springfield College, Springfield—Founded in 1885 with a present student body of about eight hundred twenty-four and a faculty of fifty-two, it offers the usual academic degrees and courses, but stresses physical education. Its purposes are expressed ". . . an educational institution that would combine sound cultural education with professional training, and which would deal with the problems of health and physical education, leisure and its use, recreation, character, and religious education, the leadership and guidance of youth, community organization, the prevention and treatment of delinquency . . . This field is sometimes called social engineering".

SCHOOLS AND ACADEMIES

(Non-academic institutions omitted)

Altaraz School, Great Barrington—"The aim of the school is to set free the often hidden and repressed spirit by providing the child with the opportunity to acquire knowledge, the ability to use this knowledge in friendship and service, and to seek ways to develop its own individual gifts and interests." Established in 1927, and directed by Dr. and Mrs. I. M. Altaraz, the school has some sixty students and a faculty of twenty.

Barrington School, Great Barrington—This school affords preparation for college with particular emphasis upon music. Established in 1923, and directed by Mrs. Ruth W. Tracy, the school has some forty-six students and faculty of ten.

BEMENT SCHOOL, Deerfield—Founded in 1923, and directed by Mrs. Lewis D. Bement, this school offers "sound academic instruction, broad creative opportunities . . .". The student body numbers forty-two.

BERKSHIRE SCHOOL, Sheffield—A preparatory school for boys, it specializes in individual training. The faculty of seventeen is directed by Delano de Windt. The student body numbers one hundred twenty.

Deerfield Academy, Deerfield

BERKSHIRE SCHOOL FOR CRIPPLED CHILDREN, Pittsfield. This school, founded in 1916, trains unfortunate children in standard and specialized fields so that they may become self-supporting.

CLARKE SCHOOL FOR THE DEAF, Northampton—Established in 1867, this was one of the first schools established for the purpose in America and it has continued to maintain its position of leadership. With a student body of one hundred fifty-three and a faculty of thirty, Dr. Frank H. Reiter, principal, has continued to follow the aims of the founders: "the best possible education for deaf children and the preparation of teachers for the deaf". The present endowment is about $2,000,000.

CRANWELL PREPARATORY SCHOOL, Lenox—A college preparatory school with a faculty of twenty-three, this institution is a Jesuit boarding and day school. It opened in 1939 with the purpose of developing boys not for college alone but also physically, mentally and morally.

CUMMINGTON SCHOOL, Cummington—With a serious emphasis placed upon the arts, this school, founded in 1923, is a co-educational institution which provides for intensive academic work but also for the practice and the enjoyment of the arts leading to professional

performance and production. The school stresses friendly relations between scholars and faculty.

Deerfield Academy, Deerfield—Established in 1797, this is one of the nation's outstanding schools for boys. Dr. Frank L. Boyden, headmaster, directs a faculty of fifty and a student body of about four hundred. It is essentially a college preparatory institution.

Eaglebrook School, Deerfield—This institution specializes in younger boys, preparing them to enter the better college preparatory

Russell Sage Chapel, Northfield School for Girls

schools of the country. Established in 1921 it has a present student body of some one hundred thirty and a faculty of thirty-nine. C. Thurston Chase is headmaster.

Foxhollow School for Girls, Lenox—A preparatory school for girls, emphasizing the thorough preparation for college in all fields, this school, founded in 1930 has a student body of about seventy-five and a faculty of sixteen. Aileen Farrell is the principal.

Hill Institute, Florence—Established in 1876, this school is open to boys and girls studying the practical arts,—sewing, cooking, woodworking and weaving. The student body numbers about five hundred. F. C. Ely is the president.

Lenox School, Lenox—Established in 1926, as a preparatory school for boys, Lenox, has a distinct emphasis upon the doctrine of the Protestant Episcopal Church. The headmaster is Rev. George Gardner Monks; the faculty numbers nine and the student body about eighty.

Mary A. Burnham School, Northampton—A college preparatory school for girls. Established in 1877, the student body now numbers one hundred thirty, and the faculty twenty-five. Mrs. George W. Emerson is the principal.

Miss Hall's School, Pittsfield—Established in 1898, this school with some ninety-two students and a faculty of nineteen, stresses "thorough education and careful training of gentlewomen". Margaret H. Hall is the headmistress.

Mt. Hermon School, Mount Hermon—One of the Northfield Schools, this preparatory school for boys is one of the leading establishments of its kind in the United States. It was originally founded in 1881 with strong religious backing by Dwight L. Moody but has developed along non-sectarian lines, stressing only a thoroughly well rounded education. Admission is very strictly governed as the school has a huge list of applications. The enrollment is limited to about five hundred and the faculty numbers about fifty. Dr. Howard L. Rubendall is the headmaster and the endowment is in the neighborhood of $1,500,000.

Northfield School for Girls, Northfield—One of the Northfield Schools, the feminine counterpart of Mt. Hermon, this school was formerly Northfield Seminary. It was founded in 1879 by Dwight L. Moody to help young women with limited financial resources to obtain a high quality education. It stresses Christian training as well as academic education. It has attained and maintains a very high standard and is now an outstanding preparatory school for girls. Dr. Mira B. Wilson is the principal. The student body numbers about five hundred and the faculty forty-eight. The endowment is in excess of $2,000,000. The Northfield Schools are operated by a board of which Dr. William E. Park is president.

Northampton School for Girls, Northampton—A preparatory school for girls, with also an emphasis on art and music, this school, founded in 1924, has a student body of about one hundred and a faculty of twenty. Dorothy M. Bement and Sarah B. Whitaker are the principals.

Pine Cobble School, Williamstown—A co-educational school for boys and girls founded in 1937, the institution is operated in two separate divisions, the Lower School, which corresponds to a grammar school, and the Upper School, which is essentially a college preparatory institution. Habits of thinking and social behavior are taught as well as the standard academic subjects. The school seeks to emphasize the value of a plain, country life with abundant opportunity to absorb the highest levels of intellectual and cultural life. It stresses the advantages of adolescence being spent in a normal and healthy atmosphere where boys and girls study together. Edgar W. Flinton is headmaster. The student body numbers about fifty; the faculty eleven.

Stoneleigh-Prospect Hill School, Greenfield — Established in 1869, this is a college preparatory school for girls, specializing in

individual supervision. Mabel H. Emerson is the headmistress. The faculty numbers sixteen; the student body, sixty-five.

Western Massachusetts School of Pharmacy, Willimansett—Founded in 1929, this school prepares for pharmacist examinations. Co-educational, it has a student body of eighty-five and a faculty of five. Dr. Joseph Gagne is the dean.

Williston Academy, Easthampton—Founded in 1841, this famous school specializes in preparing boys for college. It enjoys a student body drawn from many states and from several foreign countries. The enrollment is about two hundred fifty and the faculty numbers twenty-eight. Dr. Archibald Victor Galbraith is the headmaster. It maintains high standards at a comparatively modest tuition.

Windsor Mountain School, Windsor—Established in 1944, this co-educational school prepares its students for college, giving particular stress to modern languages. Max Bondy is the headmaster. The students number forty-two; the faculty eight.

Workshop School for Children, Longmeadow—Founded in 1924, this school specializes in educating children "physically, emotionally and socially and intellectually". Margaret Rude is headmistress. The enrollment is sixty, the faculty ten.

V

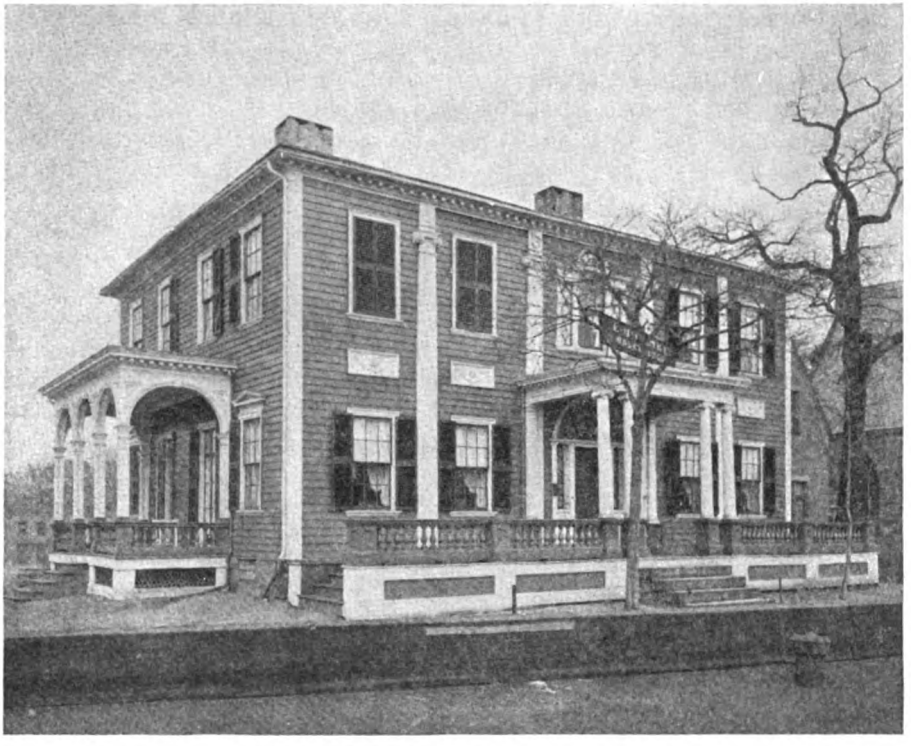
Recreation in Western Massachusetts

The New England Council points out that the "tourist trade" is presently one of Western Massachusetts' principal business activities and sources of income. It is a business which requires a very small individual outlay, since it capitalizes upon history and upon the section's magnificent and diversified natural beauty—its forests, its mountains, its lakes and rivers, and its people both in what they accomplished in the past and what they are today.

Western Massachusetts, particularly in the Berkshire Hills, enjoys a favorable situation in this tourist trade since it is conveniently reached by several railroads and very good highways from most of the northeast quarter of the nation, the area which includes the majority of the citizens of the United States. It has a peaceful and restful beauty which is appreciated by multitudes of visitors from all sections of the country. The beauty of the Berkshire Hills, well publicized by both the New England Council and the Berkshire Hills Conference, has become celebrated.

Essentially, the catering to tourists divides into two sections,—the relatively stable business of providing food and quarters for automobile parties and for vacationists seeking rest and sleep; and the recreation business which, while fluctuating greatly with the weather and economic times, has developed amazingly in the past few years and promises to grow even more in the future. Not long ago, all resort sections went sound asleep on Labor Day and dozed until the Fourth of July. Now, thanks to snow sports, winter is more profitable than was or is the summer.

Years ago, the summer boarder was the big factor in the hotel trade. People and usually families of them, mothers, aunts and the children, principally, came early as soon as school closed, and remained until Labor Day sent them home once again for school's opening. Father and the uncles usually appeared only for their two-week vacations. Trains brought these summer boarders into the



Coleman Hollister House, Greenfield

Berkshires and then they were carried to their final destinations by horse-drawn buggies, democrats, carryalls and the like.

Here and there were the typical New England hotels which were built to cater to this type of business. Many of the summer boarders were also served by farms. The old farms often had huge, square white houses with eight or more bedrooms, particularly if there was an ell attached. Rates were low at these farms but the accommodations were often superior. Certainly the food was excellent and bountiful. In those days people enjoyed eating. Starvation was not fashionable and the mountains of roasts and steaks, fresh vegetables and berries, not to mention cakes and pies eaten, seems beyond belief.

These were spacious and peaceful days and the Berkshires thrived in a modest fashion for the two summer months. The rest of the year, the hills were left to the enjoyment of the natives.

But, as with so many other features of Yankee life, the coming of the automobile changed the situation very radically. The great summer hotel vanished and from the farms the long-term boarders also fled. Instead, the boarder business changed into an overnight trade. With the roads stretching away in a network that covers the nation, people are no longer content to sit. People just want to go and go and keep going.

However, the multiplication of individual tourists has to some degree offset the much briefer tarrying. So, along the main highway, over-night camps have sprung up. Many a home, lovely, white and serene, has been opened also for overnight guests. Good hotels, some of the luxury type, have also been built to provide superior accommodations. Mostly, however, all three types do a strictly transient business.

The provision of meals is much the same as that of beds. The "cafe" has developed along the highways with hot dogs, hamburgers, soft drinks, coffee, cake and pie available twenty-four hours every day. Then, there is the middle class of restaurant which provides a wider choice and quality of food. Finally, there are the superlative "inns" and "taverns", both in the towns and cities and out along the road which offer Berkshire food at its very best. Here the traditional New England cuisine is available and the service is good and the food outstandingly excellent. About the only criticism of these establishments is that there are not enough of them around.

While some of the business these overnight camps, houses and hotels, and these restaurants enjoy is strictly that of people traveling through the hills, the greater volume of patronage comes from week-end visitors coming to the Berkshires for recreational purposes.

Of course, this is a broad term. There are visitors who come to enjoy such cultural activities as the Berkshire Music Festival, the Berkshire Garden Center and the dance and drama establishments. These do attract their thousands in season. However, a more or less constant flow of people come into the hills for other activities.

There are some aquatic sports. These have been developed principally in the southern section of the hills for in the north where the ponds and lakes are smaller and comparatively difficult to reach, little development has been undertaken. Probably much more will be undertaken very soon.

There are various camping and picnicking facilities. Chiefly these are in the state forests but many are available for rental on private property. These tent and trailer sites are coming to be more and more popular. The state itself is the chief developing agency for this type of recreation and each year it opens new areas to the public. During the Depression Years, the Civilian Conservation Corps did much of this kind of work, opening trails, clearing camp sites, building sewer systems and damming streams to provide swimming pools. Fireplaces are nearly always provided, both to minimize the forest fire hazard as well as to give encouragement to campers and picnickers.

Golf is becoming a magnet to many visitors. Many of the courses are provided by what is known as country clubs. These organizations do obtain revenue for maintenance by charging a greens fee to visitors—to the mutual satisfaction of both proprietor and patron. The Berkshire Hills have about fifteen clubs of this type. Some of them are exclusive and limit visitors while others, perhaps less extravagantly built, are always open to the public for a fee.

Then there is hunting and fishing in the hills—twin magnets in spring and fall to thousands of visitors.

Fishing, which is reasonably good in most accessible places, and really good in inaccessible waters, is probably the major outdoor sport in the hills. The hills contain some one hundred twenty-two ponds and lakes, most of small and medium size. Better yet, there must be something like a thousand brooks and small streams running down through the forests to ultimately empty into the thirteen rivers which drain the hills. Practically all these streams are open to public fishing, as are nearly all the ponds and lakes.

Fish to be caught include: rainbow trout, speckled trout, brown trout, large-mouthed bass, small-mouthed bass, perch, both white and yellow, pike, pickerel, hornpout and some lesser things. These fish are well distributed, after their habits, in practically all the brooks and ponds. The State Department of Conservation, which co-operates with the sixteen-odd sportsmen's organizations, stocks the streams and ponds regularly.

Of course, some streams are posted against public fishing, since they are the property of the private clubs and are stocked at private expense. However, arrangements can be made to fish practically everywhere, provided a state license is obtained. Laws regulating the seasons and the amount of the catch, as well as the size of the fish taken, are rigid and usually strictly enforced. Fishing licenses and fishing regulations may be obtained locally.

Hunting is not as generally available as is fishing, since, naturally, it is best in the more thinly populated sections of the hills. However, hunting of some type is enjoyed in practically every town and city. Various restricted areas, such as game sanctuaries, have been established and special regulations govern hunting in the state forests—where, of course, the hunting is the best. The various sportsmen's clubs have also exhibited a marked interest in the management of wild life and as a result of this public and private interest, the hills have brought back much of its wild life, particularly the more desirable species. The hills do offer unusually good hunting for such things as: ruffed grouse, woodcock, pheasant, deer, fox, rabbit, raccoon and, occasionally, wildcat, lynx and bear. Otter and mink are taken but they are strictly not game. Fur-bearing animals are practically extinct for they were exterminated many years ago, although some are grown for the market on private ranches—like mink and silver fox.

Winter sports are beginning in late years to have great importance. The old time sports of ice-skating and ice-boating, as well as

bob-sledding, are of minor importance. Some towns and resorts do clear the ice for these but as a rule the ponds and the hills are too snowy for common use. Sleigh riding is practically non-existent. The state plows the road right down to the black during every storm to keep the way always open,—hence there is no snow for the sleds and sleighs to glide over.

However, skiing has developed into a really major activity. The hills are really wealthy in the basic raw material of skiing—steep mountain sides. Of course there must be development too, cleared slopes for the downhill runs, and open trails for cross-country runs. Then there must be mechanical means of one type or another of lifting the skier up to the top of the hill. These things all require capital but through various business and political organizations, such as the Berkshire Hills Conference, the skiing plant of the hills has been well developed and plans call for further extension.

Then there must be a further development—transportation into the ski regions and accommodations for the skiers. The Berkshire Hills have little to do in this section of winter sports, since the hills have good roads and good service. Indeed, the institution of the daily and week-end ski train points this clearly. Each week end, in season, trains run up out of Boston and New York bringing thousands upon thousands of gaily clad enthusiasts. Some come for several days; others return the same night. It is the hills' good fortune that the slopes are near enough to two great cities to make this possible.

Finally, there are the trails. The Berkshire Hills, like most vacation areas, are not as a rule at their best along the main roads. To really enjoy the forests, the hills and the streams, it is necessary to follow trails over which no motor can roll. These trails are open only to those who travel on horseback or on foot. The beauty they enjoy is ordinarily considered well worth the cost in time and energy.

These hiking and bridle trails all through the Berkshire Hills are excellent. The work of various organizations, such as the Berkshire Conference, the Appalachian Mountain Club, the Youth Hostels, the Massachusetts Forest and Park Association, the United States Forest Service, the Massachusetts Department of Conservation, the National Park Service—the list is long,—the trails are of the highest quality. They are well mapped and are open to everyone. An inquiry at any town or city provides full information.

In addition to these public trails created particularly for walking and riding, there are also what to some minds and tastes are an even better system of trails. These are the old and abandoned roads. The old roads, which are kept open more or less to reach remote farms and various enterprises such as logging operations, are ideal for use in late spring, summer and autumn. Then there are the forgotten old roads which no longer lead anywhere. Use of these roads, many of which are practically overgrown by the forest, is not advised to city people unless they are experienced in following faint traces. But if the hiker or the rider can make his way without a map, and without signposts, then these abandoned roads are the very best way

to find recreation in the Berkshire Hills. Each curve, each hilltop brings a new vista and, often, a great surprise. There are secret forest nooks, often with water tumbling down into black pools, and there are openings which look deep into infinity.

All in all, the Berkshire Hills offer millions many types of recreation and country pleasures at the cost of only two or three hours of travel. The hills are ideal and their future seems limited only by the ability people of the hills to publicize and develop the resources of forest and mountain which they possess so richly.

VI

Newspapers

There is one great Western Massachusetts paper which, for a time, was one of the best published anywhere in the world. This is the *Springfield Republican,* for generations a journal of national importance. It reached its peak under the master editor, Samuel Bowles, I. Today, it is an honored name. In the Berkshires themselves, three other papers attained wide prominence, *The Greenfield Gazette and Courier,* the Northampton *Hampshire Gazette* and the *Berkshire County Eagle.*

A century ago, in the golden age of the small paper, each little hill-town felt poverty stricken if it did not have its own little weekly which related all the tiny items of news that happened between press times. But that is over and done with—so far as can now be known, although inventions and applications only shadowed at the moment, such as television, facsimile by radio and distribution of big-time sheets by plane may change the picture before long. It would seem as if the small town paper still has a place. Most of the small town papers have gone, leaving nothing but files of yellowed and crumbling issues in attics and in public libraries—plus something of cherished memories.

Springfield's *Republican,* founded in 1824, together with its sister sheets, the *News* and the *Union,* practically monopolize its Western Massachusetts area.

Up at the northern end of the Berkshires, Greenfield takes the same position as does Springfield and hence its leading paper, the *Recorder-Gazette,* founded in 1792, is the voice of the region.

To a lesser degree, in Holyoke, the *Transcript,* founded in 1882, takes over, as does the *Transcript-Telegram* in Holyoke, the *Transcript* in North Adams and, in Northampton, the *Hampshire Gazette.* Through their strategic locations these dailies have continued to endure.

This same factor of local conditions enabling a paper to continue is shown in the few weeklies which have continued to survive. There are not many.

In Amherst, there is the *Record,* founded in 1844; in Chicopee, there is the *Herald,* 1927, and the *Nowa Anglia,* 1915; in Dalton, the

Village Press, 1924; and in Great Barrington, the *Berkshire Courier,* 1834.

Finally, left until last because it is an exception, there is the *Berkshire Eagle,* published in Pittsfield. Because Pittsfield has grown and prospered, and apparently is scheduled to continue to develop even more, particularly if the alleged process of the national decentralization of industry continues on the scale anticipated, the *Eagle,*

(Photo courtesy The Holyoke Public Library)

View of Holyoke — Southwest From City Hall Tower

Probably about 1873. St. Paul's Episcopal Church immediate foreground. Appleton Street School left center (later named "Lawrence School").

the only paper published in this strongly-beating heart of the Berkshires has been able not merely to continue but also to develop. It is the single exception to the failure which has attended all the other papers in the heart of the hills.

The *Eagle* was founded among the very first in the hills, in 1789 to be exact. It had its ups and downs with the other papers of the section but the coming of the railroad through the hills about a century ago and the development of industry, which meant a host of various shops and service institutions, kept the city growing and hence the circulation and advertising developing. The *Eagle* had the ability to add to its expenses by increasing its news service, its features and the rest. Thus today, deep in the hills, the *Eagle* stands out as the one big Berkshire Hills newspaper. Undoubtedly it will continue to

dominate the region for, while the General Electric plant is the one big organization in the city's economy, there is some diversification of industry—woolen textiles, silk thread and braid, paper mill machinery, knit goods, women's hats, stationery, buttons, paper boxes, foundries and machine shops. There are even seven banks; as well as private schools, lime and granite quarries and—above all else—Pittsfield is the heart of the summer resort business in the Berkshires. With this diversification and still more industries being urged to come in and make themselves at home, the *Eagle* is in a position to prosper continuously.

VII

The Arts

In all artistic climates, two factors seem decisive. First, there is what is customarily described as the physical environment—which is by ordinary meant an abundance of beauty, together with sufficient isolation to provide peace and quiet and freedom to do about as one pleases.

The Berkshires of Western Massachusetts provide precisely such an environment. The hills are possessed of a magnificent beauty, beauty of many kinds. There are the majestic panoramas of meadow, pasture and mountain; there are dark and savage wilderness areas; there are the calm, sheltered and placid valleys where streams meander peacefully and the lawns and shrubberies show that humanity has conquered the wild and driven away all unfriendly influences; there are these and there are infinitely many smaller environments where a few plants of blue violets send their flowers in waves to break against the boles of white birches, places where cardinal flowers rise out of feathery ferns to look at their brilliant scarlet mirrored in the sleeping waters of a woodland pool. There are places where a man can shake hands with the sky and be utterly alone. Just so there are places where he can, during his humble hours, find a crevice where he can hide his hurts and his head until green life restores the balance once again. In the Berkshire Hills there is just about anything an artist of all media known can find precisely what he desires, no matter how his needs may shift from day to day,—or from hour to hour for that matter.

Second, there is the factor of people, what can be called the human environment, and once again the Berkshires provide an ideal climate. An artist may have the type of company he needs or at least desires whenever he wishes it. Schools, colleges, music, gardens, libraries—the hills have become richly endowed with much that any artist can demand.

Of course, it was not always thus. The original settlers were Puritans. What is important in understanding the social climate of the Berkshires, which were and still are Puritan, is that the original stock took life as a very serious matter. They had to do so for, isolated not overnight from home in Europe as today but by a matter

of several weeks, they had to stand on their own feet and tame a wilderness peopled with savages and animals that were bad enough but were magnified to greater degrees of peril by superstitious fears and terrors. The Puritan had to master a wilderness with his own bare hands. His only tools were his axe, his musket and, most important of all, his Bible. With these three he succeeded and won a continent.

Public Library, Lee

As far as the Berkshires go, the comparatively great isolation of the area, a separate province within the Bay Colony, created a spirit of independence. Saved from a too swift acquaintance with the softening and, to the hills' mind, corrupting, influence of Europe, the citizens of the section went their own way, serene, confident and efficient. That economic and social forces were swiftly to change things mattered not at all in the beginning. The spiritual climate made for freedom and thus began the establishment of the environment of today, so hospitable to the arts.

The first symptom of this beginning is displayed by Jonathan Edwards, the great Puritan divine, so called—although in point of fact he was not a Puritan at all, but an American product reacting against the English theology, which the hill folk even then found irksome.

Edwards, of course, was a child of his times and his views were black beyond modern comprehension. He spent seven years of his life in Stockbridge, as previously recounted, and here, his genius flowered in his *Freedom of the Will.* This product of the Berkshire Hills was the first book written in America to influence the thought

of the entire world. It was, and still is, historically speaking, one of the world's literary masterpieces.

The next great product of the Berkshires was the poet William Cullen Bryant, born in Cummington in 1794. After a boyhood on the farm of his physician father, he tried law in the hills but then left for New York City where he became a national figure as editor and poet. Probably Bryant marks a turn in the tide of life in the Berkshires. His theology, although important, was not that of somber Edwards. It was rather a trusting in the goodness of God, stressing that rather than the earlier fear of His wrath. Still more important, and here the Berkshire Hills lift their lovely heads, his was the first excellent nature poetry America produced. The interpretation of the material world, and lyrical response to it, has since Bryant's time, been a characteristic of American writing and it was the hills that first turned America's eye away from the material worth of the physical world to its value esthetically.

A third figure of the time was Catherine Sedgwick, who in 1822, surprised herself and her neighbors in Stockbridge by writing *A New England Tale.* It became a best seller for its day although unreadable now because of its stiff style and moralistic tone. Her other works included *Redwood,* 1824, and it is significant that her books, because of their sentimentality probably, enjoyed wider reading in Europe than did such more modernly appreciated writers as Poe and Cooper.

Miss Sedgwick is locally important also because her family, one of the really prominent clans in the Berkshires, attracted many distinguished visitors from the world of the theater, the dance, and others, to the hills. All aliens who came liked the place and the people. Some purchased land, built homes and began to work—thus establishing the Berkshires as an artistic eden.

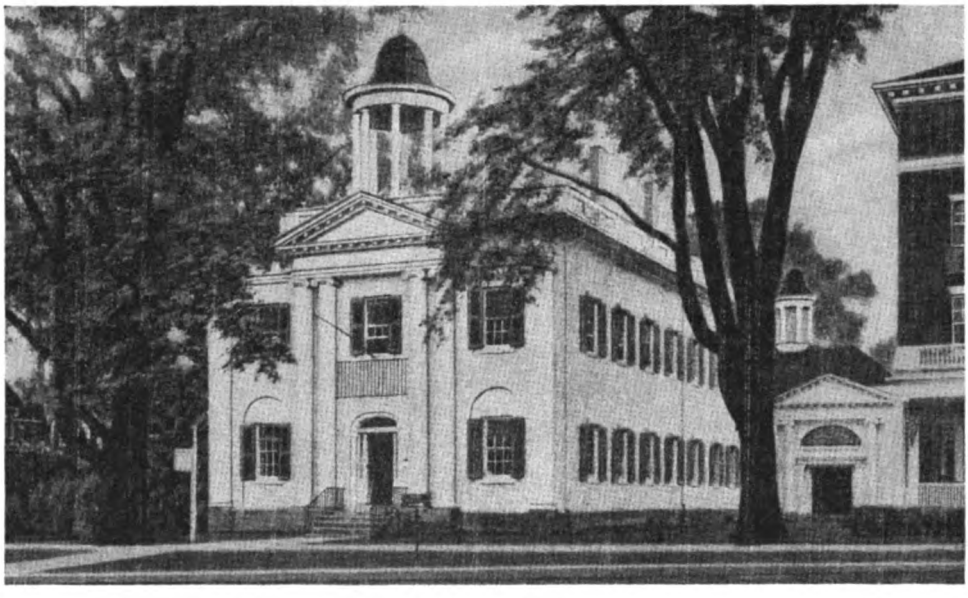
This process did not rush into flower, as did Concord, nor has it yet faded. It developed slowly and has continued without serious check to its present prominence.

It was at least in part because of the Sedgwick hospitality that two other great early American writers came to the Berkshires at about this time. One was Herman Melville and it was during his residence in the hills that yet another great American and, for that matter, world classic, *Moby Dick* was written.

As for Hawthorne, the other visiting writer, attracted by the beauty and the peace of the hills, some of his best work was done elsewhere, in Salem and Concord, but it is significant that one of his books, *The Scarlet Letter* aside, which seems most likely to endure was *Tanglewood Tales,* which he wrote in the little Red Cottage near the summer home of the great literary doctor, Oliver Wendell Holmes. Perhaps the spirit of the Berkshires is evident in this book of Hawthorne's. Certainly it is his happiest and his easiest—qualities which might have been gained from his visit to the purple hills. It was also while in the Berkshires that Hawthorne wrote his greatest classic, *The House of the Seven Gables.*

There were other important writers who lived for a time in the congenial climate of the hills. It is enough to say that the literary prominence thus early achieved served, as it usually seems to do, to attract practitioners of the other arts. Thus, today, the Berkshires not only have colonies of writers but also stand out as a summer haven for three other great forms of expression, music, the dance, and the theater.

As for the theater, whose activities are necessarily limited to the summer season, the hills are today contributing a great deal to the



Lenox Library

American stage. Playwrights such as Sidney Howard and Robert E. Sherwood were closely identified with the hills and Walter Prichard Eaton, writer, naturalist, historian and dramatist presently lives at Sheffield.

Then there is the Berkshire Playhouse. Founded in 1928, this nationally celebrated theater is the home of summer stock. Famous stars usually are surrounded by able casts and plays are presented in a series running for about two months each summer. Usually the plays chosen are well established successes but, now and then, a new play is given its first hearing. A story of the Berkshire Playhouse is presented on other pages of this history.

Doubtless other theatrical ventures, attracted by the success of the Playhouse, will appear in the hills. In fact, one such enterprise seems already established. This is the Rollins Theater School which was founded in Lenox in 1946 as a school of the drama. It has never lacked for students. Many come but few are chosen for the requirements are high. The school also presents plays in a barn which has

been rebuilt into a small theater and the student actors do well both by themselves and by the audience.

The hills have certainly proven hospitable to the drama. They are also demonstrably kind to dancers; witness the story of Ted Shawn's Jacob's Pillow presented elsewhere in this work.

Finally, the Berkshires, hospitable as they have always been to the great art forms of literature, painting and sculpture, has astonished itself and the world for that matter by its enthusiasm for music during the past few years.

Of course, there has always been music in the Berkshires. The English as a people are devoted to song. For centuries the ease of expression in music has always been a hallmark of gentility. The new-come settlers, of course had no opportunity to practice music, but as soon as the wilderness was conquered, and transportation improved sufficiently to permit pianos coming into the hills, music was very common. Fiddles squeaked at the barn dances and secular observances, organs began to appear in churches as the old, black religious strictness softened and in homes of prosperity chamber music was very commonly played—and appreciated.

Being Americans, band music flourished mightily in the nineteenth century and town bands frequently gave concerts throughout the year, outdoors during the summer and indoors in schools or town halls during the inclement seasons.

Against this friendly and appreciative background, the summer visitors, particularly those who settled down to become residents, found the organization of groups for the serious study, composition and performance of music relatively a simple matter. Probably the outstanding example of this is the South Mountain Concert in Pittsfield, an enterprise founded not long ago by Elizabeth Sprague Coolidge. Here, on Sunday afternoons, the Berkshire String Quartet gives its very excellent performances. They are by invitation only but, during the summer months, the public is invited free to the capacity of the South Mountain Temple of Music—a rather small building, provided with church pews for the audience but with windows opening upon magnificent vistas of green meadows and purple mountains. It is reported that the influence of this enterprise has become very wide as much of the present interest in chamber music presently apparent across the nation stems from the mountain to the south of the City of Pittsfield.

In 1934 began what has become not alone the Berkshires' greatest musical adventure but one which has taken world-wide acclaim. This is the Berkshire Musical Festival at Tanglewood, near Lenox; a story more fully developed on other pages.

On the silent hills around, farms may have been abandoned and down in the remote valleys, the dams of vanished small industries are mouldering too, but the spirit of the Berkshires is still alive and very prosperous.

HISTORICAL INDEX

Personal and Family History Index in Volume IV

Historical Index

Abbey, Henry, II, 802
Abercrombie, Daniel P., Jr., II, 573, 615
—— Douglas, II, 807
—— General James, I, 362
—— William, II, 806, 807
Abrahams, Walter, II, 710, 712, 714
Academies (see Schools and Academies)
Adam, William, II, 731
Adams, Annie Brown, I, 409
—— Rev. C. Collard, II, 896
—— James Truslow, I, 21
—— John, I, 371
—— John Quincy, II, 829, 879
—— Samuel, I, 334, 335; II, 813, 879
Adams, I, 105, 301, 438; II, 477, 483, 484, 560, 566, 597, 635, 650, 671, 906, 919-922
Agassiz, Prof. Louis, II, 885, 886
Agawam, Indians of, I, 166-178
Agawam, Town of, I, 302, 351, 396; II, 595, 641, 671, 837, 839
—— Plantation, I, 118, 158, 191-205, 375; II, 783
—— River, I, 127, 153, 167, 175, 183, 276, 277; II, 461, 671, 779, 783, 882
Agawam Becomes Springfield, I, 191-205
Albany, New York, I, 41, 148, 149, 248, 253, 270, 307-428, *passim*; II, 464, 465, 471-544, *passim*, 628, 782, 784, 871, 911, 913, 919
Alden, John, I, 99
Aldenville, II, 672
Alexander, Henry, II, 833
—— Henry, Jr., II, 548, 549
Alford, II, 651, 671, 944
Allen, Ethan, I, 315, 440; II, 800
—— Hezekiah, II, 883
—— Joel Asaph, II, 882-886
—— Joel, 2nd, II, 883
—— John, I, 185; II, 800, 882
—— Jonathan, I, 492; II, 801
—— Joseph Asaph, II, 884
—— Nehemiah, II, 800
—— Samuel, II, 882, 883
—— Rev. Thomas, I, 438
—— Thomas, I, 345
—— William, I, 442
Allis, Dexter, I, 408
—— John, I, 286
Allyn, Matthew, I, 159, 160
Altaraz School, II, 950
American College of Surgeons, I, 433
American International College, II, 950
American Medical Association, I, 433
American Revolution, Coming of the, I, 330-341
Ames, David, II, 791, 795, 797, 865
—— David, Jr., II, 791
—— Fisher, II, 468
—— Harold L., II, 757
—— John, II, 791, 869
—— N. P., II, 799
—— Governor Oliver, II, 564
Amherst, Sir Jeffrey, I, 232, 307, 308, 310, 311, 312, 314, 362; II, 785
Amherst, I, 335, 346; II, 486, 488, 544, 591, 595, 616, 630, 632, 637, 638, 662, 671, 947, 949, 959
Amherst College, II, 947
Amherst Record, II, 959
Amory, R. G., II, 878
Anbury, Thomas, I, 346
Anderson, J. Albin, Jr., III, 218-219
Andover, I, 323
Andre, Jesse Albert Graves, III, 91-92
Andrus, F. C., II, 942
Anthony, Susan B., I, 438; II, 671, 771
Appleton, Julius Henry, III, 184
—— Thomas, I, 442
Argentinita, II, 766
Armory, Springfield, I, 362-396; II, 862-877
Armory Hill, Springfield, II, 848-862
Arms, George A., II, 812
Arnold, W. F., II, 817
Arrowheads, II, 818-826
Art, II, 961-965
Artificers at Springfield, I, 390
Ascutney Mountain, Vermont, II, 600
Ashfield, I, 446; II, 655, 656, 672
Ashley, Robert, I, 202, 207, 208, 227
—— Gen. John, II, 824
—— Joseph, II, 796, 883
—— Parson, II, 803, 807
Ashley Falls, II, 679
Ashmun, Eli P., I, 443
—— George, II, 552
Athol, II, 478, 617, 618, 630
Atkins, J. D., II, 735
Attleboro, II, 580
Atwater, George M., II, 549, 550
Auburn, II, 579
Austin, Nathaniel, II, 461
Automobiles, II, 841-842
Avery, William, I, 291

Babcock, Samuel, II, 791
Bach, Johann Sebastian, I, 29; II, 765, 776, 777, 778
Bacon, Theo(dore) S(paulding), M.D., II, 798; III, 353-354
Bagg, Edward Parsons, M.D., IV, 385
—— Ernest Newton, I, 145
Bailey, William James, III, 210-211
Baker, Bianchi, II, 671
—— Bianchi, II, 671
—— Dr. Hugh P., II, 757, 949
—— Osmun, I, 445
—— Ray Stannard (David Grayson), I, 445; II, 671
—— William H., Jr., II, 757
Balding, Nathan, I, 335
Baldwin, Colonel Jeduthan, I, 320, 366, 369
Ball, Francis, II, 203, 207, 208, 288
—— James, I, 323
—— Mary Washington, II, 762

Ball, Philip H., IV, 261
—— Philip H., Jr., IV, 262
Balloon Ascension, II, 886
Bancroft, George, I, 442, 443; II, 816
—— Thomas, I, 215
Bancroft, II, 672
Bangor, Maine, II, 821
Banking, II, 670, 827
Bar Harbor, Maine, II, 751
Bard, Harry H., M.D., IV, 370
Barney, Everett H., I, 213
Barnstable, I, 61
Barre, II, 702
Barrington School, II, 950
Barry, William Redmond, IV, 249-250
Bartholomew's Cobbles, Sheffield, I, 98 (ill.)
Bartlett, Joseph T., IV, 261
—— Maj. Gen. William T., I, 438
Basketball, II, 844
Bates, D., II, 540
—— Isaac C., I, 443
Baxter, James Phinney, II, 949
Bay Path, I, 147-153; II, 458, 459, 474
Bay State, Massachusetts, II, 548, 678
Beach, Chandler, Sr., II, 812
Beale, Goodman, I, 239
Beals, Joseph, I, 435
Beaman, Simon, II, 805
Beamon, Daniel, I, 213
Becher, George David, M.D., III, 39-40
Becket, I, 327, 328, 447; II, 469, 470, 492, 494, 527, 604, 608, 609, 610, 651, 672, 770, 906
Bedortha, Reice, I, 208, 209, 219
Beecher, Henry Ward, I, 442; II, 771, 816
Behringer, T. F., II, 748
Belcher, Benjamin, I, 296; II, 795
Belchertown, I, 317, 346, 445; II, 485, 487, 591, 663, 672
Belches, Edward F., II, 942
Bell, Alexander Graham, I, 443, 448, 449, 450, 451, 452, 454, 455
Bellamy, Edward, II, 893
Bellows Falls, Vermont, II, 479, 482, 512, 513, 515
Bement, Dorothy M., II, 953
Bement School, II, 951
Bemis, S. C., II, 685, 715
Bemis Car Box Company, II, 715, 716
Bennet, Arthur, II, 800
Bennett, S. J., II, 542
Bennington, Vermont, I, 324, 342, 353, 359, 376, 377, 438; II, 457, 471, 483, 581, 606, 631, 643, 752, 787
Benson, George W., II, 731
Benton, Thomas H., II, 614
Bergan, Carl A., M.D., III, 74
Berkshire, I, 61, 309; II, 625
Berkshire County, II, 650-660, 751, 753, 754, 756, 778, 833
Berkshire Courier, II, 960
Berkshire Eagle, II, 648, 959
Berkshire Garden Center, II, 944
Berkshire Hills Conference, II, 751-754
Berkshire Medical Institute, II, 946
Berkshire Music Festival, II, 771-778
Berkshire School, II, 951
Berkshire School for Crippled Children, II, 951
Berle, Adolphe A., II, 771
Bernard, Governor Francis, I, 316
Bernardston, I, 345; II, 655
Berridge, Mrs. William A., II, 942
Berry Pond, I, 236 (ill.)
Beswick, George, II, 649
Bettigole, Alfred Willard, III, 149
Bianco, Harvey Henry, M.D., III, 225
Bicycling, II, 838-840
Bidwell, Raymond A., III 74-75
Bill, Gurdon, II, 549
Billings, Lieut. David, I, 355
Bissell, Israel, I, 302, 337; II, 786
Bixler, Prof. J. Seelye, I, 443
Blake, Elijah, I, 360
—— George, II, 879
—— William, I, 132, 138
Blanchard, Thomas, I, 375; II, 499, 533, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874
Blandford, I, 307, 308, 310, 311, 312, 313, 316, 319, 321, 322, 324, 327, 328, 329, 350, 352; II, 469, 525, 604, 605, 660, 672, 784, 832, 896, 905
Blast Furnace, The, I, 288-298
Bliss, Alexander, II, 880, 881
—— George, II, 460, 548
—— George, Jr., II, 795
—— Jesse L., II, 570
—— John, I, 221
—— Jonathan, I, 330, 331
—— Lawrence, I, 276
—— Margaret, I, 198, 207, 209, 221, 264, 269
—— Nathaniel, I, 207, 209, 213
—— Reuben, I, 344; II, 786, 863
—— Samuel, Jr., I, 213, 214, 221
—— Samuel, 3rd, I, 213
—— Timothy, I, 201, 202
Block, Adrian, I, 83
Bloody Brook Tavern Restoration, Deerfield, II, 811 (ill.)
Bodfish, Robert Ware, III, 98, 99
Boland, John Bernard, III, 207-208
Bolter, Captain Thomas, I, 389
Bolton, Charles Knowles, I, 148, 149
Bondsville, II, 678
Bondy, Max, II, 954
Bonheur, Rosa, II, 855
Boody, Azariah, II, 716
Book of Possessions, I, 2, 3
Booth, William, II, 461
Boston, I, 10-164, 192-237, 271-382, 401, 441-456; II, 457-486, 500-591, 619-651, 702-789, 801-958, *passim*
Boston Post Road, II, 473-477
Bowdoin, James, I, 368; II, 856
Bowles, Samuel, II, 511, 796, 959
Bowman, Henry H., II, 839
—— William E., M.D., III, 101
Bowne, Dr. Jacob, I, 282
Boyden, Frank L., II, 810, 811, 812, 952
—— Mrs. Frank L., II, 811
Boylston, Zabdiel, I, 431
Braddock, General Edward, I, 362
Bradford, Governor William, I, 17, 23, 55, 59, 65, 86, 87, 98, 100, 122, 123; II, 823, 890
Bradley, Joseph, I, 322
—— Milton, II, 698
—— Osgood, II, 550, 683, 716

Brahman, E., II, 817
Brainerd, David, II, 801
Braintree, I, 154, 165, 291, 334
Branch, William, I, 208, 209, 268
Brattleboro, Vermont, I, 202, 301; II, 478, 482, 497, 515, 573
Bray, Charles W., II, 755
Breton, William, II, 486
Brewer, Dr. Chauncey, I, 432
—— Rev. Daniel C., I, 306; II, 461
—— James D., II, 797
—— John, I, 311
Brewster, Judge Elisha H., I, 437
—— Jonathan, I, 79, 124
—— Mary, II, 799, 814
Brickett, General James, I, 345
Bridgeman, Sidney, II, 814
Bridgeport, Connecticut, II, 914
Bridgeport, Massachusett, II, 529
Bridgman, George, I, 209
—— James, I, 208, 210, 241, 242
Brigden, Zachariah, I, 305
Briggsville, II, 678
Brigham, D. H., II, 723, 724, 725
Brighton, II, 530
Brightwood, I, 136; II, 594, 690, 699, 713
Brill, G. M., II, 705, 706
Brimfield, I, 133, 158; II, 458, 543, 578, 579, 611, 629, 640, 660, 672, 880
Broad Brook, Connecticut, II, 887
Brockton, II, 863
Brookfield, I, 13, 253, 263, 264, 312, 317, 320, 323, 327, 335, 346, 354, 358, 359, 364, 366, 367, 368, 371, 372, 378; II, 461, 462, 466, 473, 475, 476, 477, 485, 517, 520, 610, 878, 900, 901
Brookline, II, 806
Brooklyn, Connecticut, II, 731
Brooks, Ethan, II, 844
—— Mrs. Gorham, II, 773
—— Jonathan, Jr., I, 327
Brooks & Wallace, Springfield, III, 254
Brown, J. G., II, 856
—— John, I, 406-422; II, 622
—— Solomon, I, 318
Brown, L. L., Paper Co., II, 921
Bryans, Dr. and Mrs. Walter J., II, 765
Bryant, Captain John, II, 880
—— William Cullen, I, 435, 436; II, 674, 771, 909, 963
Buck, Daniel, II, 516
Buckland, Cyrus, II, 868, 869
Buckland, I, 446; II, 474, 655, 672
Buckley, Joseph William, III, 145
Buell, Dr. Raymond Leslie, II, 771
Buffalo, New York, II, 491
Bulkley, James Stewart, III, 85-86
Bull Run, Virginia, I, 397
Bumstead, Josiah, II, 686
Bunker Hill, Charlestown, I, 339, 363, 441; II, 532
Burgoyne, General John, I, 320, 322, 323, 342-361, 376, 379, 380, 434; II, 460, 786
Burgoyne's Army in Massachusetts, I, 342-361
Burkeville, II, 632
Burnett, Gov. William, II, 845
(Mary A.) Burnham School, II, 953
Burns, William Adams, III, 31-32
Burr, Aaron, I, 441; II, 801
—— George A., II, 736
—— Jehu, I, 132, 138, 139, 166, 184, 191, 423
Burrall, John, I, 207
Burt, David, I, 385
—— Eunice, II, 879
—— Henry M., I, 186, 207, 209, 221
—— John, Sr., I, 279
—— Jonathan, Sr., I, 215, 218, 264, 265
—— Nathaniel, I, 221, 335
—— Sylvia, II, 879
Busey, Norval H., Jr., II, 771
—— Mrs. Norval H., Jr., II, 763, 764, 767
Butler, Lydia, II, 883
—— Dr. William, I, 59
Butterfield, Samuel, I, 139, 144
Byers, James, I, 296, 385, 393
Byrd, William, I, 26, 30, 73, 97, 101

Cable, George W., I, 443
—— John, I, 132, 139, 152, 185, 268; II, 779, 782, 783
Cabot, John, I, 2
Cabotville, II, 661, 684, 798
Cadwel, William, I, 386
Calhoun, William B., II, 873, 899
Call, Amos, II, 667, 669
Callahan, John R., Jr., III, 103
Cambridge, I, 123, 124, 307, 323, 329, 336, 356, 358, 360, 361, 363, 372, 374; II, 460, 478, 483, 635, 822, 884
Camp Banks, Springfield, II, 876
Campbell, L. L., I, 434; II, 591
—— Mary, II, 760, 767
Canaan, Connecticut, I, 312,; II, 530, 582, 631, 752, 832
Canals, II, 500-509
Canoes, Indian, I, 43-51
Canton, I, 165
Cape Cod, I, 6, 8, 61, 65, 70, 83, 87, 126
Cardigan, James Brudenell, Lord, II, 861
Carew, Joseph, II, 791, 794, 795
Carey, James F., II, 893
Carlton, William R., I, 153, 154; II, 473
Carpenter, Robert John, M.D., III, 122-123
—— Frederick John, Jr., M.D., C.M., IV, 263
Carter, Stephen W., II, 757, 758
—— T. W., I, 417
Cartier, Jacques, I, 43; II, 820
Cary, George H., I, 453
—— George W., II, 616
Census, An Indian, I, 17-27
Chaffee, Orwell, II, 731, 737
Chalmers, Thomas, II, 801
Chamberlin, Franklin, I, 416
Champlain, Lake, I, 84
—— Samuel de, I, 4, 8, 43, 44, 70; II, 820
Chandler, Diamond, I, 224
Chapin, Charles Wells, II, 871
—— Chester W., I, 407; II, 548
—— Daniel, II, 722
—— Edw. P., II, 589
—— Ethan S., II, 549
—— Frederic, II, 722
—— Henry, I, 233
—— John, I, 386
—— Joseph, II, 863
—— Levi, II, 793

Chapin, Mr. and Mrs. Russell, II, 768
—— Samuel, I, 134, 207, 217, 230, 232, 242, 268, 269, 289
—— William, II, 863
Chapman, Nathaniel, I, 391
—— Reuben A., I, 416, 417; II, 836
—— Judge Rufus, I, 419
Charcoal Kilns, Pelham, II, 658 (ill.)
Charlemont, I, 345; II, 477, 483, 484, 655, 672, 727, 906
Charles I, I, 2, 78, 88, 173
Charles II, I, 54, 94, 109, 173
Charles River, I, 335; II, 537
Charlestown, Massachusetts, I, 305, 339, 356, 358, 455
Charlestown, New Hampshire, II, 813
Charlton, II, 517, 519, 579
Charron, Rosario C., M.D., III, 49-50
Chase, J. G., II, 668
—— Levi Badger, II, 475
—— William A., II, 555, 575
Chatham, II, 518
Chatham Centre, New York, II, 531
Chatham Corner, New York, II, 529, 530
Chauncey, Nathaniel, II, 461
Cheever, Ezekiel, I, 366, 373, 376, 390, 391
Cheney, Ward, II, 729
Cheshire, I, 105, 437, 438; II, 577, 651, 672
Chester, I, 352; II, 492, 493, 660, 832, 833
Chesterfield, Philip Stanhope, Lord, I, 109
Chesterfield, I, 345, 437, 489, 663, 672
Chestnut trees, II, 847-848
Chicopee, I, 302, 399; II, 508, 539, 560, 575, 619, 627, 641, 672, 690, 692, 697, 723, 796, 798, 844, 863, 869, 900, 914, 922, 959
Chicopee Falls, I, 18, 41, 148, 158, 235-238, 270, 288, 291, 296, 417; II, 560, 569, 575, 594, 614, 626, 641, 661, 672, 791, 839, 841, 846
Chicopee Herald, II, 959
Chicopee River, I, 127, 158, 170, 171, 181, 200, 206, 235, 238, 268, 277, 288, 327; II, 466, 473, 474, 501, 502, 520, 521, 522, 661, 672, 784, 798, 875
Child, David Lee, II, 816
—— Lydia Maria, II, 816
Childs, Dr. Henry Halsey, II, 946
Choate, Joseph Hodges, II, 771
—— Mabel, II, 771
Christmas, New England, II, 893
Church, Moses, I, 376; II, 881
—— Sylvia, II, 800
Church, Typical New England, Greenfield, II, 939
Churches, II, 675 (ill.), 676 (ill.), 809 (ill.), 823 (ill.), 895 (ill.), 939 (ill.), 960 (ill.)
Civil War, I, 397-405
Clapp, Charles W., II, 573
—— Edward, II, 815
—— Ezra, I, 311, 327, 329
—— Capt. Roger, II, 816
—— Thaddeus, II, 573
—— Warham, II, 814
—— Mrs. Warham, II, 814, 815
Clappville, II, 519
Clark, Alvan, I, 446
—— Clifford, II, 757
—— Edward T., II, 768
Clark, E. O., II, 896
—— Fanny G., II, 648
—— James, II, 605
—— John, I, 208, 209, 233
—— William H., II, 902
Clarke, Christopher, II, 816
—— John, I, 442; II, 802
—— William, I, 12, 25, 26, 442; II, 799
Clarke School for the Deaf, II, 951
Clarksburg, I, 336; II, 652, 673
Claverack, New York, I, 312, 320, 324, 329, 349; II, 464
Cleveland, Grover, I, 446
—— Mary Manning, II, 884
Clinnock Hill, II, 464
Clothing, I, 28-42
Coburn, John, I, 304
Cochran, Eve Owen, I, 443
Coco, Joseph Paul, M.D., III, 259
Cogswell, Joseph, II, 816
Coffin, Edward F., II, 648
Cole, Jack, II, 759
Colleges:
American International College, II, 950
Amherst College, II, 947
Massachusetts Institute of Technology, II, 949
Mt. Holyoke College, II, 947
Smith College, II, 948 (ill.), 949
Springfield College, II, 950
State Teachers College, North Adams, II, 949
State Teachers College, Westfield, II, 949
University of Massachusetts, II, 949
Williams College, II, 946, 947, 949
Collis, Christopher, II, 505
Colonial Expeditions, I, 86-95
Colrain (Coleraine), II, 619, 655, 673, 906
Colton, Diamond, II, 881
—— George, I, 208, 209, 212, 216, 218, 219, 220, 221, 288; II, 795
—— Isaac, I, 214
—— Jacob, I, 224
—— Samuel, I, 332, 339, 340
—— William, II, 880
Columbus, Christopher, I, 1, 107; II, 874
Company A, I, 397
Comstock, Ada, I, 443
Conant, Joseph, II, 730, 737
Concord, I, 335, 336; II, 906, 963
Congregational Church, Hinsdale, II, 675 (ill.)
Conkey, Ithma, I, 445
Conklin, Grace Hazard, I, 443
Conneally, Thomas F., IV, 275
Connecticut River, I, 2-83, 103-276, 308-396, 445-456; II, 457-527, 541, 544, 614-684, 713-790, 828-912, *passim*
Connecticut Valley, I, 9, 21, 83, 84, 237, 246, 448; II, 574, 590, 615, 625, 749, 781, 784, 818, 820, 878
Connecticut Valley Historical Society, I, 201, 248
Conservation, II, 938-945
Constable, William, II, 743
Conway, I, 445, 446; II, 546, 582, 583, 584, 585, 619, 632, 633, 656, 673

Conwell, Dr. Russell, I, 437
Cook, Judge Rufus H., III, 89-90
Cooley, Ariel, I, 301; II, 507, 508
—— Benjamin, I, 200, 209, 210, 211, 216, 219, 220, 221; II, 508
—— Eliakim, I, 216
—— Joseph, I, 281, 288
—— Mortimer E., II, 508
—— Obadiah, I, 211, 213, 215, 217, 218
Cooley Brook, Longmeadow, I, 211 (ill.), 213
Coolidge, Calvin, I, 437, 443
—— Elizabeth Sprague, II, 771, 965
—— Marcus A., II, 573
—— William, II, 878
Cooper, James Fenimore, II, 963
—— Dr. Lambert, I, 428
—— Thomas, I, 139, 171, 185, 207, 238, 266, —— 268, 428; II, 780, 781
—— Dr. Timothy, I, 428
Copake Falls, N. Y., II, 678
Copeland, N. Newall, M.D., III, 80-81
Copland, Aaron, II, 777
Copley, John Singleton, I, 330
Corcoran, Mrs. Luke, II, 797
Corlet, Elijah, I, 238
Corn, Indian, I, 107, 110-117
Cornwallis, General Charles, I, 393; II, 862
Corriden, Thomas Francis, M.D., III, 156
Cortland, New York, II, 762
Costello, Thomas J., II, 755
Cosgrove, Robert E., II, 649
Cote, Valmore O., III, 174
Cotton, John, I, 289
Court, Massachusetts General, I, 3, 89, 120, 124, 193, 196, *passim*; II, 903
Court, Suffolk County, I, 199
Court House, Pittsfield, II, 940 (ill.)
Cowett, Joseph Barys, III, 191
Cox, Mrs. Eugene R., II, 758
Crafts, William, I, 374
Craig, William, II, 621
Cranberry, I, 94, 95
Crane, Winthrop Murray, I, 437; II, 621
—— Zenas, II, 792, 916
Crane Advertising Wrapper, Early, II, 915 (ill.)
Crane Museum, II, 917 (ill.)
Crane Paper Company, II, 916
Cranwell Preparatory School, II, 951
Crescent Mills, II, 679
Cromwell, Oliver, I, 81, 199, 226, 227, 288, 289; II, 894
Crook, Douglas, III, 48
Crooks, Edgar F., II, 743
Crosby, Edward C., II, 573
Crown Point, New York, I, 311, 314
Cummings, John Baptist, III, 139
—— V. Paul, M.D., III, 223
Cummings, Rosenthal & Reilly, Pittsfield, III, 139
Cummington, I, 436; II, 663, 673, 906, 909, 951, 963
Cummington School, II, 951
Curran, John Joseph, M.D., III, 167
—— William, Louis, M.D., III, 230
Curwen, Samuel M., II, 706, 712
Cushing, Frank Hamilton, I, 282, 283
Cushion, Edward M., II, 648
Daft, Leo, II, 564, 565, 567
Daggett, Moses, II, 795
Dakin, Winthrop S., III, 137
Dalton, I, 437; II, 527, 528, 573, 611, 624, 639, 652, 673, 792, 959
Dalton *Village Press*, II, 959, 960
Dame, Lawrence Raymond, M.D., III, 88-89
Damon, Mrs. Hazel, II, 648, 750
Dartmouth, I, 263
Davenport, Abigail, II, 461
—— Russell L., III, 153-154
—— Thomas, II, 561
Da Vinci, Leonardo, II, 874
Davis, Daniel M., II, 708
—— Edith M., II, 708
—— Dr. Herbert, II, 949
—— Norman H., II, 771
—— Samuel, I, 394, 395; II, 857
—— Warren, II, 764
—— Capt. William, I, 205, 238
Dawes, Henry L., I, 436
—— Colonel Thomas, I, 372, 374, 375, 376, 377, 378; II, 857
Day, Benjamin, I, 381
—— Ernestine, II, 760
—— Frances Dwight, II, 797
—— Dr. Joshua, I, 430
—— Mrs. W. Taylor, II, 942
Dean, F. Wilton, M.D., IV, 265-266
deBarbe-Marbois, Marquis, II, 462, 878
Dedham, I, 102, 164; II, 574, 727, 830
Deerfield, I, 23, 30, 39, 40, 252, 263, 264, 300, 301, 339, 345, 428; II, 461, 497, 498, 511, 573, 633, 656, 673, 801, 802-813, 903, 906, 913, 951, 952
Deerfield Academy, II, 810, 951 (ill.), 952
Deerfield Church, II, 809 (ill.)
Deerfield River, I, 103; II, 502, 583, 672, 802, 906, 912, 919
deHeredia, Mrs. Carlos M., II, 771
Deitz, Louis J., III, 232-233
deMille, Agnes, II, 765, 766
Deming, Titus, II, 638
Denison, Judge John Avery, IV, 364-365
Dennison, Aaron L., II, 863
De Nesse, Byrne, M.D., III, 214
Depew, Chauncey, II, 771
De Rose, Charles, II, 755
Desautels, Antonio Paul, M.D., III, 204-205
deSoto, Hernando, I, 69
Desrochers, Bernard Charles, M.D., III, 203
deStoecke, Baron, II, 796
—— Elizabeth Howard, II, 796
De Vries, David, I, 44; II, 822
deWindt, Delano, II, 951
Diamond, Frank, II, 764
Dibble, John, I, 208, 209
Dickens, Charles, I, 460; II, 722
Dickinson, Emily, I, 445; II, 671
—— John, I, 431
Dietel, Robert C., M.D., 108
Dillon, William T., III, 132
Dimock, Ira, II, 735, 740
—— Lucius, II, 735, 739, 741
Doane, R. L., II, 539
Dobelle, Martin, M.D., III, 228-229
Dolan, Patrick H., II, 573
—— Peter C., II, 573

Dolin, Anton, II, 762
Donley, George S., II, 618
Donna, John L., III, 119-120
Donnelly, Hugh, I, 400
Doran, Raymond, II, 624
Dorchester, Anthony, I, 217
—— John, I, 292
Dorchester, I, 95, 118, 129, 183, 425; II, 816
Doucette, William, II, 599, 626
Dover, New Hampshire, I, 68; II, 561
Dow, Frank E., M.D., IV, 360-361
Downes, Olin, II, 776
Doyle, Sir Arthur Conan, II, 892
Dracut, I, 322, 323
Drew, Mrs. Marian, II, 807
Drowne, Shem, I, 306
Dubois, Goddard, II, 758
—— Herbert E., II, 554, 648
Dudley, George E., II, 555
—— Thomas, I, 291
Dumbleton, John, I, 269
Dumouchel, Antoine, M.D., I, 61-62
Dunning, Ray Potter, III, 94-95
Dwight, Edmund, II, 789
—— Colonel H. W., II, 771
—— James Scutt, I, 331; II, 797
—— Jonathan, Jr., II, 881
—— Gen. Joseph, II, 674
—— Josiah, I, 303, 305, 306; II, 796
—— Margaret, II, 802
—— Mary Stoddard, II, 796
—— Sereno, I, 442
—— Col. Thomas, II, 796
—— Dr. Thomas, I, 283
—— Rev. Timothy, I, 441, 442; II, 500, 505, 864
—— Whitney, II, 802
Dwyer, William E., III, 87
Dyer, Dr. Lora G., I, 436

Eaglebrook School, II, 952
Earhart, Amelia, I, 444
Earle, Alice Morse, II, 722
East Brimfield, II, 672
East Brookfield, II, 520
East Lee, II, 605, 606, 608
East Longmeadow, II, 540, 673
East Northfield, II, 678, 755
East Otis, I, 319; II, 678
East Springfield, II, 465, 601, 611, 785
East Windsor, Connecticut, I, 335, 361, 441; II, 883
Easthampton, I, 439, 450; II, 548, 638, 663, 673, 922-926, 954
Eaton, Amos, II, 946
—— E. W., II, 735
—— Walter Prichard, II, 771, 942, 964
Eaton Paper Corporation, II, 932, 933
Eayrs, Joseph, I, 366, 374, 379, 387, 388, 390, 391, 393
Eckstorm, Mrs. Fannie Hardy, I, 157
Eddy, Wilson, II, 717
Edison, Thomas A., II, 565
Edman, George, II, 771
Education, II, 946-954
Edwards, Alexander, I, 208, 209, 218
—— Jerusha, II, 801
Edwards, John S., II, 830
—— Rev. Jonathan, I, 441; II, 771, 800, 801, 815, 905, 962
Egerton, Charles O., II, 648
Egremont, II, 592 (ill.), 652, 673, 907
Electric Railways, II, 628 (map)
Electric Traction, Western Mass. Pioneers in Field of, II, 561-567
Elevator, First Hydraulic, II, 836, 837
Eliot, John, I, 118, 129, 156
Elliott, Samuel, II, 467
Ellis, H. W. II, 690
Ellsworth, Oliver, II, 468
Elwell, William S., I, 145
Ely, F. C., II, 952
—— Joseph, II, 784
—— Gov. Joseph B., I, 439
I, 54, 77
—— Martin, II, 786, 863
—— Mary Riley, II, 784
—— Nathaniel, I, 202, 254, 269
—— Samuel, I, 202, 213, 214, 295
Ely, King, Kingsbury & Lyman, Springfield, I, 54, 77
Emerson, Mrs. George W., II, 953
—— Mabel H., II, 954
—— Margaret, II, 773
—— Ralph Waldo, I, 10, 420, 442; II, 816
Emery, H. E., II, 687, 689, 693
Enfield, I, 133, 153, 206, 212, 214, 216, 322, 327, 358, 359, 360; II, 487, 499, 509, 663, 789, 871, 883
Erie, Lake, I, 46
Erving, II, 657, 673
Eustis, Gov. William, II, 532
Evelyn, John, I, 227; II, 894
—— Richard, I, 58
Exell, Richard, I, 207, 209
Exodus, The, I, 126
Exploration, Early, I, 74-85

Falmouth, II, 759
Fairhurst, Charles, II, 757
Fairview, II, 672
Fairfield, Connecticut, I, 104, 139
Fall River, I, 456
Famous Folks of Western Massachusetts, I, 434-477
Farley, Philip J., II, 748
Farmer, Prof. Moses G., II, 561
Farmington, Connecticut, I, 39, 160
Farnumville, I, 156
Farrell, Aileen, II, 952
Faxon, Thomas, I, 165
Fein, Samuel Law, III, 79-80
Fenwick, Bishop Edward Dominic, II, 519
Ferne, Sir Mortimer, I, 74
Field, Cyrus W., I, 451; II, 771
—— Rev. David Dudley, II, 771
—— Eugene, I, 445; II, 671
—— Marshall, I, 445
—— Stephen Dudley, II, 562, 563, 564, 918
—— Virginia, II, 563
Finkelstein, Nathan, M.D., F.A.C.S., IV, 397-398
Finn, John H., II, 755
First Baptist Church, Lanesborough, II, 676 (ill.)

First Church, Springfield, I, 271
Fisher, Alvan, II, 482
Fishkill, New York, I, 361, 382
Fisk, Charles A., II, 693, 699
—— George C., II, 686, 687, 688, 689, 690, 693, 694, 699, 700, 701, 702, 705, 706
—— Harry G., II, 797, 846
—— Noyes W., II, 846
Fiskdale, I, 158; II, 474, 475, 578, 579
Fiske, John, I, 441
Fitchburg, II, 639
Fletcher, Adolphus, II, 486
—— Sally Stowe, II, 486
Flinton, Edgar W., II, 953
Flo, Spencer, M.D., III, 114
Florence, I, 445; II, 547, 548, 557, 560, 678, 727, 731, 733, 735, 736, 738, 740, 741, 742, 745, 746, 748, 816, 924, 952
Florida, Massachusetts, II, 652, 673
Flucker, Lucy, I, 320, 362
—— Thomas, I, 320
Flynn, John F., M.D., III, 103
Flynt, Henry N., II, 803, 805, 806, 808
Food, Indian, I, 52-68
Food Costs, II, 837-838, 846
Foot, Homer, I, 549
—— Nelson A., III, 130
Forbes, Judge Charles E., I, 443; II, 802
Forbes Library, Northampton, II, 750, 814
Ford, Henry, I, 275; II, 841
Forestdale, II, 513
Forests, I, 6-16
Fort Duquesne (Pittsburgh, Pa.), I, 53
Fort, Indian, I, 272-285
Fort Sumter, South Carolina, I, 397
Foster, Jedidiah, I, 335
—— Paul W., II, 751
—— R. T., II, 710, 713
Fowler, James, II, 492
Foxhollow School for Girls, II, 952
Framingham, I, 323, 441
Franklin, Benjamin, I, 330, 351, 441; II, 459, 475
Franklin, I, 309
Franklin County, I, 655-660
—— Law Library, IV, 263, 264
Franz, Joseph, II, 764, 765, 766, 771, 775
Fraser, Simon, I, 342
Freeman, Perrin Newell, M.D., III, 143-144
French, Daniel Chester, II, 771
—— John, II, 802
French and Indian Wars, I, 299-306
Friction Matches, II, 721-725
Frobisher, Martin, II, 819
Frost, Robert, II, 671
Frothingham, Captain Benjamin, II, 880
Fulton, Robert, II, 508, 509, 865

Gage, General Thomas, I, 316
Gagne, Dr. Joseph, II, 954
Gaines, Samuel, I, 242
Galbo, Samuel J., M.D., 208
Galbraith, Dr. Archibald Victor, II, 954
Gangemi, Michael Angelo, M.D., 70-71
Ganley, Margaret Evers, IV, 371-372
Ganley & Crook, Springfield, III, 48
Garden Club Federation of Massachusetts, II, 944
Gardiner, Lionel, I, 177
Gardner, Charles M., I, 439
—— Edwin Sprague, IV, 253
Garrison, William Lloyd, I, 434; II, 731
Gass, William E., II, 804, 805, 807, 808
—— William E., Jr., II, 806, 807
Gates, Maj. Gen. Horatio, I, 323, 346, 354, 380, 432, 434; II, 787
Gaylord, Emerson, II, 697
—— S. G., II, 555
General Electric Company, II, 930-932
George III, I, 2, 3
Gerard, John, I, 109
Germain, Lord George, I, 342
Geronimo, I, 27
Gilbert, John, I, 286
—— Thomas, I, 215, 219, 220
Gill, II, 657, 662, 674
Gillett, Hon. Frederick H., I, 438
—— Ralph D., II, 573, 576, 577, 578, 610, 630
Gilson, C. P., II, 569
Gladden, Rev. Washington, I, 439
Gladstone, Robert Warren, M.D., III, 219
Glascow (Blandford), II, 469
Glastonbury, Connecticut, I, 101
Glendale, II, 681
Glodt, Herbert R., M.D., III, 210
Gloss, Dr. George, II, 760, 761
Glover, Dr. John, I, 425
—— General John, I, 343, 346, 353, 354
—— Rev. Pelatiah, I, 266, 425, 433
Gobble Mountain, II, 493
Goewey, Harold R., III, 196
Gold, Nathan, I, 460
Goldschmidt, Jenny Lind, II, 816, 900
—— Otto, II, 900
Goldthwait, Daniel, II, 490
Goodale, Elane, I, 443
Goodall, P. E., II, 555
Goodwin, William, I, 257
Gordon, Gurdon W., III, 215-216
—— Louis Juda, III, 44-45
Goshen, I, 312; II, 663, 674
Gower, Frederic A., I, 449, 452, 453, 455
Graham, Sylvester, I, 442
Granby, Connecticut, I, 333
Granby, Massachusetts, II, 663, 664
Granfield, William J., III, 14-15
Grant, John J., II, 719, 927
—— Lewis Corbin, II, 464
Granville (now Towland), I, 324, 352; II, 465, 660, 674
Graves, Collins, I, 440
Gray, Henry, I, 408
—— Sarah, II, 800
Great Barrington, I, 297, 308, 309, 311, 312, 314, 315, 316, 317, 318, 319, 320, 322, 323, 324, 329, 349, 379, 380; II, 581, 595, 652, 674, 784, 787, 905, 906, 914, 916, 918, 943, 944, 960
Great Barrington High School, II, 943 (ill.)
Green, Mason A., I, 306
—— S. S., II, 828
Green Mountains, Vermont, II, 902
Greenbush, II, 491, 531, 532
Greene, D. Crosby, M.D., III, 284-285
—— General Nathaniel, I, 324, 367, 382, 384; II, 788

Greene, William B., II, 900
Greenfield, I, 345; II, 484, 511, 522, 523, 534, 573, 583, 591, 592, 593, 602, 603, 615, 616, 618, 624, 629, 632, 633, 644, 657, 674, 694, 718, 719, 720, 721, 754, 812, 887, 912, 913, 914, 926-929, 939, 953, 955, 959
Greenfield Gazette and Courier, II, 648, 959
Greenfield Recorder-Gazette, II, 959
Greenleaf, Orrick H., II, 791
Greenwich, Connecticut, II, 803, 807
Greenwich, Massachusetts, II, 486, 487, 663
Gridley, Richard, I, 363
Grife, Oscar, III, 181
Griffin, William, II, 606
Griswold, Edward, I, 245
Guilford, Connecticut, I, 23, 106

Hacklinton, Francis, I, 244
Hadfield, Joseph, I, 463
Hadley, Dr. Henry, II, 771, 772, 777
Hadley, I, 25, 29, 35, 39, 40, 41, 108, 134, 158, 172, 175, 176, 212, 216, 221, 222, 252, 256, 258, 260, 263, 264, 267, 268, 274, 306, 310, 316, 317, 326, 335, 345, 346, 428, 440, 444, 445; II, 460, 486, 488, 498, 504, 544, 637, 638, 663, 675, 780, 796, 824
Haigis, John W., II, 754, 755
Haines, Charles D., II, 572, 573
Hale, Edward Everett, I, 100
—— Rev. Enoch, I, 440
—— John, I, 376
—— Joseph, Jr., II, 873
—— Nathan, I, 440
Hall, Dr. G. Stanley, I, 446; II, 907
—— Margaret H., II, 953
—— Parker L., I, 470
—— Thomas, II, 562
(Miss) Hall's School, II, 953
Hallock, Rev. Moses, I, 435
Ham, Roswell Gray, II, 947
Hammond, John C., II, 548
Hampden, I, 309; II, 675, 680
Hampden County, II, 660-662
Hampden Park, I, 179
Hampshire, I, 309
Hampshire County, II, 662-666, 678
Hampshire Gazette, II, 648, 959
Hampton Beach, New Hampshire, II, 606, 607
Hancock, John, I, 335, 370, 440
Hancock, Massachusetts, II, 471, 485, 490, 494, 528, 652, 675
Hancock, New Hampshire, II, 684
Hanna, Dan R., II, 772
Hannay, Agnes, II, 749
Hanover, New Hampshire, I, 232
Hanson, L. O., II, 686, 687, 695
Hapgood, Asa, II, 702
Haradon, Charles R., II, 892
Harding, Chester, I, 446
Hardwick, II, 486, 487
Harmon, John, I, 207, 209, 365
Harper's Ferry, West Virginia, I, 419, 422
Harrington, Henry L., III, 185-186
Harris, Frederick, II, 598
—— Nathan, II, 883
Hartford, Connecticut, I, 39, 82, 122-199, *passim*, 221, 223, 367, 368, 386, 395, 423, 448; II, 462-599, *passim*, 622, 643, 704, 722, 793, 796, 839, 871, 879, 881, 882, 912, 914
Harwinton, Connecticut, I, 312, 382
Harwood, W. L., II, 623, 710
Hastings, Alfred H., II, 755
—— George, I, 410
—— Dr. Henry O., II, 598
—— Thomas E., II, 547
—— Waitstill, I, 409
Hatch, Solomon, II, 795, 857
Hatfield, I, 39, 40, 237, 252, 263, 317, 345, 355, 445; II, 498, 593, 595, 616, 637, 638, 663, 675
Haverhill, II, 893
Hawkes, Clarence, I, 445
Hawley, Gen. Joseph, I, 440; II, 800
—— N. I., II, 853
Hawley, I, 434; II, 657, 675
Hawthorne, Nathaniel, I, 309; II, 771, 773, 963
Hay, Lt. Col. Udney, I, 382
Hayden, Joel, II, 923
—— Josiah, II, 923
Haydenville, I, 440; II, 682, 735, 736, 746
Hayer, George Paul, IV, 263-264
Hayes, Donald Robert, M.D., III, 78-79
—— Edmund, I, 207
—— Justin E., M.D., IV, 251-252
Hearn, Fred, II, 761
Heath, General William, I, 323, 353, 356, 357, 358, 359, 366, 369, 370, 372-375
Heath, I, 301, 334; II, 657, 675
Heeks, William Garland, M.D., IV, 274
Helscher, Fern, II, 761, 766, 768
Hemenway, Kenneth H., III, 225
Hemenway & Hemenway, Northampton, III, 225
Hendee, George M., II, 839
Henry VII, I, 1
Henry VIII, I, 81
Henry, Patrick, I, 440
Herdic, Peter, II, 542
Herrick, Joe, I, 321
Hertz, Louis, II, 561
Hibbard, Stephen Brace, III, 28-29
Higgins, Raymond Francis, M.D., III, 216
—— W. L., I, 437
Higginson, Francis, I, 100; II, 819, 823
Hill, James, I, 311
—— Samuel L., II, 731, 732, 733, 735, 736, 741
Hill Institute, II, 952
Hillsdale, I, 319, 349
Hinckley, Judge Samuel L., II, 733, 735
Hinsdale, Massachusetts, I, 437; II, 490, 493, 527, 573, 639, 652, 675, 694, 906
Hinsdale, New Hampshire, II, 693
Hitchcock, John, I, 266, 268
—— Samuel, I, 281
Hixon, John R., II, 668
Hobbs, Joseph R., D.Sc., M.D., III, 111-112
—— S. D., II, 543, 546
Hockanum, II, 675
Hodgdon, Samuel, I, 390, 393
Hodgkins, Clarence E., II, 755

Hoffman, Bernard, II, 562, 648
—— Mrs. Bernhard, II, 945
Hoisington, C. W., II, 542
Holden, II, 486
Holland, Harrison, II, 802
—— Josiah G., I, 147, 224, 307, 445; II, 688, 802
Holland, II, 660, 675
Hollister, Coleman, II, 955
—— Gilson D., I, 224
Holmes, Asa, II, 599
—— Oliver Wendell, II, 679, 963
Holyoke, Elizur, I, 139, 200, 203, 205, 207, 208, 226, 232, 237, 238, 260, 268, 269, 276; II, 598, 629, 830
—— John, I, 167, 171
—— Mary, I, 203, 227, 231; II, 829, 830
—— Samuel, I, 269
Holyoke, I, 159, 261, 454, 456, 480, 489, 513, 517, 543, 545, 546, 555, 556; II, 560, 574, 575, 576, 586, 591, 593, 602, 612, 614, 625, 627, 629, 634, 641, 676, 708, 743, 755, 756, 782, 789, 791, 792, 834, 835, 840, 844, 847 (ill.), 914, 959, 960 (ill.)
Holyoke Transcript-Telegram, II, 648, 959
Hooker, John, II, 801
—— Gen. Joseph, I, 444
—— Thomas, I, 153, 193, 194, 196
Hoosac Mountain, II, 477, 532, 652, 771, 913, 919
Hoosac Tunnel, II, 536 (ill.), 913
Hoosick, New York, I, 345
Hoosick Falls, New York, I, 606, 631
Hopkins, Governor Edward, I, 423
—— Erastus, II, 900
—— Mark, II, 617, 771
Horn, George, II, 760, 769
Horsecar Era, The, II, 544-560
Horton, John, I, 241
Hosmer, Thomas, II, 800
Hospitals, I, 433
Hough, Garry de Neuville, Jr., M.D., I, 423; III, 53
Houghton, Rev. Herbert R., II, 809
—— John, I, 295
Housatonic, II, 674, 920
Housatonic River, I, 176, 308, 309, 311, 359; II, 496, 527, 528, 751, 914, 943
Housatonic Valley, II, 784, 902, 903, 904, 905
Houses, Early New England, I, 96-106
Houses, Indian, I, 69-73
Houston, E. J., II, 565
Howard, Frances, II, 796
—— George E., II, 861, 862
—— James L., II, 861, 862
—— John, I, 400; II, 796
—— Sidney, II, 771, 964
Howe, Florence Thompson, II, 721, 877
—— Julia Ward, I, 442
—— Admiral Richard, I, 357
—— Sir William, I, 342
Howell, John, II, 860, 861
Hoyt, Perley Adelbert, M.D., IV, 378-379
—— William Fenn, M.D., III, 96-97
Hubbard, Margaret, I, 270
—— Samuel, I, 202, 241
—— William, I, 264, 269
Hudson, Henry, I, 32, 70, 83
Hudson, New York, II, 518, 519, 530, 833
Hudson River, I, 307, 314, 315, 317, 324, 332, 342, 361, 368, 382, 448; II, 472, 482, 483, 490, 491, 509, 530, 531, 533, 544, 684, 913, 916
Huettner, Adam, II, 648
Hughes, James M., I, 287
Hulbert, Archer B., I, 148
Hunstable, Thomas, I, 322, 324, 359, 382, 383, 389
Hunt, Jared, I, 436
—— John, II, 801
Hunter, William, I, 269
Huntington, II, 573, 605, 606, 607, 641, 642, 676, 830
Huston, Robert, I, 311
—— Nickels Batchelder, III, 159-160
Hutchinson, Ann, I, 225
Hyde, Henry S., II, 687, 688, 689, 694, 699, 705, 706, 844
—— Louis C., II, 695, 699, 705
—— Thomas W., II, 844

Indian Aliment, I, 52-68
—— Canoes, I, 43-51
—— Census, I, 17-27
—— Garb, I, 28-42
—— Houses, I, 69-73
—— Population, I, 17-27
—— Skulls, I, 20 (ill.), 64 (ill.)
Industry, II, 650-750, 918-938
Infant Mortality, I, 425
Infantile Paralysis, I, 248, 250
Ingersoll, Thomas, II, 856
Interlaken, II, 681
Ipswich, I, 153, 270, 276; II, 726
Isnee, John Andrice, I, 351

Jackson, Helen Hunt, I, 445; II, 671
—— Howard Lafayette, M.D., III, 65-66
Jacob's Pillow, II, 757-770, 965
James, G. P. R., II, 771
Jamestown, Virginia, I, 99
Jarvis, Samuel Gardner, I, 379
Jefferson, Thomas, I, 441; II, 651, 652, 879
Jekanowski, Judge Harry, III, 123-124
Jenks, Mrs. Zelda (Paige), II, 695, 696, 699
Jenney, Walter, II, 570
Jennings, Joseph Richard, III, 107-108
Jess, William, I, 207
Johnson, Charles F., II, 710, 713
—— Clifton, I, 445
—— Edward, I, 100; II, 820
—— Harriet, II, 776
—— Capt. Irving, I, 445
—— James W., II, 771
Jones, E. D., II, 932
—— Griffith, I, 208, 209, 219
—— J. Howard, IV, 359-360
—— J. Wyman, II, 547
—— Katherine, I, 209
—— Morgan, I, 208
—— Samuel Messer, II, 711, 889-893
—— Samuel Milton, II, 892
—— Samuel Porter, II, 892
—— Theodore Winslow, M.D., IV, 239-240

Jordan, David Starr, II, 886
Joslin, Mrs. Eric F., II, 764, 767
Josselyn, John, II, 461
Joyce, Harry, II, 759
Judd, Fred, II, 580
—— Sylvester, I, 440
Judea Society (Washington), I, 104
Judges (see Lawyers)
Judson, Harry Evenden, M.D., III, 124

Keane, J. J., II, 626
Keep, John, I, 207, 221, 222
Kendall, I, 456
Kenderhook Mills, I, 464
Kennedy, J. B., II, 616
Kenney, Asa, II, 866, 867
Kenyon, Silas, II, 724
Kernan, Clement F., M.D., III, 46-47
Kettering, Charles F., II, 842
Keyes, Daniel Matthew, Jr., III, 135-136
Kilbourn, Henry, II, 516
Kilburn, Carrie, II, 749
Kilroy, Dr. Philip, I, 281
Kinderhook, New York, I, 311, 314, 316, 318, 320, 321, 323, 324, 329, 343, 346, 349, 354, 379; II, 531, 787
King, Dorothy, II, 882, 886
—— F. E., II, 551, 558
—— Jonas, I, 434
—— Raymond Thomas, III, 77-78
—— Robert W., III, 55-56
—— Stanley, II, 947
King Philip, I, 27, 29, 176, 223, 269, 272, 274, 275, 286, 309, 428
King Philip's War, I, 14, 23, 35, 66, 139, 172, 176, 219, 221, 247, 260, 262-271, 275, 276, 286, 291; II, 836
King William's War, I, 299
Kingsbury, Frederick Macdonald, IV, 362-363
Kipling, Rudyard, II, 573
Kitfield, P. H., II, 649
Kitson, Henry Hudson, II, 771
Knapp, C. A., II, 542
Kneeland, Robert Shepherd, III, 116-117
Knight, Lt. Gov. Horatio G., I, 439; II, 923
Knoll, Stoddard, II, 800
Knowlton, Benjamin, I, 279
Knox, General Henry, I, 307, 318, 319, 320, 323, 329, 360, 363, 364, 366, 369, 371, 372, 373, 376, 378, 392, 500, 786, 787, 862, 912
Knox Trail, I, 307-329; II, 787
Kossuth, Louis, II, 830, 898, 899, 900, 901
Koussevitzky, Dr. Serge, II, 771, 773, 774, 775, 776, 777
Krassovska, Natalie, II, 768
Kugler, Herbert P., IV, 308

Ladd, Charles M., I, 274, 275
—— S. W., II, 687, 689, 693
Lafayette, Marquis de, I, 361
Laidley, Dr. J. B., II, 583
Lake Champlain, II, 785
Lake George, I, 318, 339, 362
Lake Huron, I, 46
Lake Mahkeenac, II, 772, 773
Lake Ontario, I, 46
Lake Pleasant, II, 633, 636, 677
Lake Winnepesaukee, I, 21; II, 831
Lamb, Mrs. Martha, I, 435
La Meri, II, 763, 766
Lamson, Charles, I, 444
Land-Purchase Technique, I, 251-261
Land Titles, Massachusetts, I, 1-5
Landers, Dennis, II, 760
Lanesborough, Massachusetts, I, 163, 438, 439; II, 652, 676, 677, 897
Lanesboro, Vermont, I, 345
Langdon, John, I, 372
—— L. W., II, 547
Langton, George, I, 207, 209
Lasker, Henry, III, 155-156
Laurel Hill Association, II, 944
Laurel Lake, II, 773
Lawrence, G. W., II, 687
Lawrence, I, 454, 455
Lawton, Christopher Jacob, I, 309
—— S., II, 717
—— W. C., II, 717
Law Office, Parker L. Hall, II, 470 (ill.)
Lawyers, III, 14, 15, 24, 25, 26, 28, 31, 44, 48, 54, 56, 60, 63, 66, 68, 74, 77, 79, 81, 85, 87, 89, 91, 94, 98, 99, 103, 107, 113, 116, 119, 123, 130, 132, 135, 137, 139, 145, 149, 152, 153, 155, 156, 159, 167, 174, 181, 185, 188, 191, 196, 201, 203, 207, 210, 215, 218, 225, 228, 232; IV, 235, 249, 253, 260, 261, 263, 264, 268, 275, 290, 291, 308, 359, 362, 364, 367, 371, 377, 386, 404, 408, 410, 417, 423, 425, 427
Leavitt, Rev. Joshua, I, 434
Lebanon, Connecticut, I, 380
Lebanon, New York, II, 490
Lee, Ann, II, 528
—— Gerald Stanley, I, 443
—— Col. Horace C., II, 831
—— Jeanette, I, 443
—— Col. Roswell, II, 866, 867, 868, 869, 875
Lee, II, 494, 604, 606, 608, 652, 677, 916, 962
Lee Public Library, II, 962 (ill.)
Leeds, II, 678, 735, 736, 740, 747
Leicester, I, 327, 346, 354, 359; II, 461, 466, 519
Leland, Rev. John, I, 437, 438
Lenox, II, 494, 496, 502, 653, 677, 751, 773, 774, 776, 833, 902, 944, 951, 952, 964, 965
Lenox Horticultural Society, II, 944
Lenox Library, II, 964 (ill.)
Lenox School, II, 952
Lent, Sylvester Mead, M.D., III, 160-161
Leominster, II, 478, 573
Leonard, Edwin F., II, 603
—— Gideon, I, 322, 382, 384, 385, 387, 388; II, 787, 788
—— John, I, 208, 209, 210, 211, 218, 220, 269
—— Dr. John, I, 429
Lerner, Maurice I., IV, 268
Leverett, Governor John, I, 267, 274
Leverett, II, 657, 677
Levin, Stanley Spence, M.D., III, 170
Lewis, Marcus W., I, 148
—— Mary, I, 196
—— Meriwether, I, 12, 26
Lexington, I, 335, 336, 362, 363, 369; II, 786, 906

Lexington Alarm Men, Springfield Division, I, 337, 338
Leyden, II, 659, 677
Lilly, A. T., II, 733, 735, 741
Lincoln, Abraham, I, 397; II, 552
Lincoln, II, 478
Lind, Jenny (Mrs. Otto Goldschmidt), II, 816, 900
Lindquist, John, II, 768
Lister, Jane, II, 801
Litchfield, I, 312, 382, 386; II, 784, 785, 787
Lithia, II, 674
Littlefield, D. G., II, 736
—— W. J., II, 589
Log houses, I, 96
Lombard, Daniel, II, 880
—— Daniel, Jr., II, 881
—— David, I, 211, 217
—— John, I, 208, 209, 211
—— Joseph, I, 281
—— Roderick, I, 283, 284
Longfellow, Henry Wadsworth, I, 442; II, 771, 875
—— Samuel, II, 875
Longmeadow, I, 40, 153, 171, 173, 206-224, 270, 277, 302, 306, 332, 335, 339, 340, 429, 430; II, 461, 499, 500, 660, 677, 796, 879, 954
Longmeadow Brook, I, 213
Long Plain, II, 677
Looker, Earl, I, 443
Loomis, William S., II, 555, 575
Lord, Joseph, II, 883
Love, William Deloss, I, 152
Lovejoy, Elijah Parish, I, 413
Lowder, William, I, 324
Lowell, James Russell, II, 771
Lowell, II, 539
Lowton, Jacob, II, 461
—— James, II, 461
Lucas, Dr. Herman S., II, 832, 833
Ludlow, I, 159, 303; II, 522, 619, 660, 677, 854
Lukeman, Augustus, II, 771
Lull, James W., II, 540, 541, 542, 543
Lumbard, Daniel, II, 879
Lunt, George C., II, 928
Lyman, Benjamin, II, 802
—— Edward, II, 802
—— Edwin Hall, Jr., III, 54
—— Eugene, I, 437
—— George W., II, 789
—— Gen. William, II, 802
Lynch, John C., II, 772
Lynn, I, 154; II, 564, 566, 704
Lyon, Marcus, II, 522
—— Margerie, II, 760, 761
—— Mary, I, 446; II, 474, 947
Lyons, J. J., II, 589

MacLaren, Ian, II, 771
Madison, James, II, 879
Madison, Maine, II, 890
Mahony, Stephen Andrew, M.D., III, 196-197
Maillefuild, John, I, 429
Malta, New York, II, 483
Mamanash, Elizabeth, II, 814, 816
—— (Mamanache), Joseph, II, 814, 816
Mamanash (Mamanach, Maminash), Sally, II, 800, 814-818
Mann, Col. W. D., II, 701
Manse, The Old, Deerfield, I, 444 (ill.)
Mansfield, Connecticut, II, 726, 730, 737, 880
Mansion House, The, I, 244-250
Manwell, Edward James, M.D., III, 44
Maranville, Walter, I, 436
Marble Mill, West Stockbridge, II, 651 (ill.)
Marblehead, I, 343; II, 878
Markham, E. F., II, 540
—— R. P., II, 540
Markova, Alicia, II, 762
Marlborough, I, 312, 323, 356, 359; II, 458, 459, 461, 462, 465, 467
Marsh, Daniel J., I, 272, 400, 402
—— Joseph, II, 557
Marshall, O. Dixon, IV, 235-236
Marshfield, Samuel, I, 202, 210, 213, 218
Mason, Colonel David, I, 362, 363, 373, 380, 381, 387, 390, 391, 392, 393, 432
—— John, II, 878
—— Primus Parsons, II, 849, 850
Massachusetts Bay Colony, I, 99
Massachusetts Bay Company, I, 2, 88, 89
Massachusetts Forest and Park Association, II, 941
Massachusetts Horticultural Society, II, 944
Massachusetts Institute of Technology, II, 949
Massimiano, Antonio Gerald, M.D., III, 129-130
Mather, Cotton, I, 192, 193
—— Increase, I, 223
—— Richard, I, 192, 193
—— Samuel, II, 460, 809
Matthews, John, I, 208, 209
Matton, William, II, 858
Maurer, Rev. Irving, I, 442
Maxwell, Col. Hugh, I, 434
—— M. J., II, 649
McAdam, John L., II, 834
McCallum, Alexander, II, 737, 743
—— E. W., II, 748
—— George, II, 743, 748
—— James, II, 801
—— Revell, II, 748
McCarthy, Edward J., Sr., II, 825
McCormack, George R., III, 81
—— Wilbur, II, 760
McCranney, Margaret Riley, II, 784
—— William, II, 784
McDonnell, John, II, 576, 649
McGrath, William, II, 649
McKerr, Frederick Gunby, M.D., III, 320
McKinley, William, I, 438; II, 576, 581, 595
McKnight, J. D., II, 851, 858, 859
—— W. H., II, 851, 853, 858, 859
McKnight Glen, II, 552
McLaughlin, Edwin Francis, III, 152-153
McMahon, Francis Michael, III, 290-291
—— Joseph M., III, 291
Measam, George, I, 386
Medford, I, 323, 356; II, 574
Medicine, I, 17, 18, 53, 75, 248, 250, 423-433; II, 946 (see also Physicians and Surgeons)
Meeker, Jess, II, 760

Meeting House, The First, I, 183-186, 187 (ill.), 188-190
Meeting House, The Second, I, 286, 287
Mellen, Charles S., II, 584, 585, 587, 610
—— J. S., II, 686
Melville, Herman, II, 771, 963
Mendon, I, 263; II, 490
Meriden, Connecticut, II, 736
Meritorious Price of Our Redemption, The, I, 197
Mermet, Raymond E., II, 648
Merriam, George, II, 898
Merrick, Joseph, II, 492
—— Thomas, I, 152, 208, 209, 210, 212, 218, 242, 268, 300, 376
Merrigan, Thomas W., II, 802
Merrimac River, I, 8, 11, 79, 105, 120
Merriman, Dr. John, II, 832
Messer, Edward R., M.D., IV, 249
Meyer, Henry B., II, 701
Middleborough, I, 263
Middlefield, II, 492, 493, 663, 677
Middleton, Allyn, II, 697
Middletown, Connecticut, I, 203, 431; II, 829, 881
Mighill, John, I, 292, 293
Migration, The Great, I, 86-95
Milford, II, 580
Mill River, Springfield, I, 41, 127, 128, 132, 171, 177, 180, 181, 201, 202, 212, 232, 233, 234, 268, 277, 288, 293, 296, 440; II, 661, 725, 737, 738, 742, 743, 744, 791, 861, 862, 864
Mill River Blast Furnace, I, 288-298
Millay, Edna St. Vincent, II, 771
Miller, Apollos, I, 351
—— Ellen, II, 810
—— Francis, II, 475, 485
—— Mrs. Lawrence K., II, 942
—— Obadiah, I, 289, 296
—— Patience, II, 800
—— Thomas, I, 174, 175, 218, 238, 266
—— William Davis, I, 162
Millers Falls, II, 497, 501, 603, 632, 633, 636
Mills, Elijah H., I, 437, 443
Mitchell, Dave, II, 820, 821
—— John Houston, III, 63
—— Matthew, I, 132, 138, 139, 144, 177
Mittineague, II, 559, 614, 792
Mohawk Trail, II, 607 (ill.) 671 (ill.), 904 914, 940
Monks, Rev. George Gardner, II, 952
Monongahela, Pennsylvania, I, 362
Monroe, James, II, 879
Monroe, II, 659, 677
Monson, II, 660, 677, 850
Montague, II, 497, 500, 501, 596 (ill.), 597, 615, 616, 624, 632, 633, 659, 677
Montague City, II, 625
Monterey, I, 307, 308, 311, 319; II, 677, 784, 906
Montgomery, II, 660, 677
Montreal, Canada, I, 301, 311, 314, 362; II, 497, 627
Montville, II, 679
Moody, A. Gordon, II, 755
—— Dwight L., II, 953
Moore, John J., II, 689, 693, 694, 700
Moores Corner, II, 677
Moreno, Don, II, 759
Morgan, Arthur E., II, 758
—— Miles, I, 139, 207, 241, 242, 248, 249, 250, 268, 276, 287, 288, 426, 428; II, 695
—— Pelatiah, I, 269
Morris, Oliver B., II, 848
—— Robert O., II, 886
Morrison, David Wiley, M.D., IV, 294
Morse, Dr. Moses, I, 432
—— Samuel F. B., I, 455
Morton, Thomas, I, 33
Moseley, Edward F., II, 539
—— Nathaniel, II, 539
Mosher, Charles F., II, 616
—— Rufus, II, 545, 546
Moulton, Joseph, II, 928
—— William, II, 928
Mount Everett, II, 771, 773, 903
Mount Washington, New Hampshire, II, 653, 678
Mount Whitney, California, I, 442
Mowbray, George W., I, 438
Mower, Ephraim C., I, 488
Moxon, Rev. George, I, 103, 134, 138, 183, 184, 185, 188, 191, 194, 199, 207, 423, 424
—— Martha, I, 197
—— Rebecca, I, 197
Mozart, Wolfgang Amadeus, II, 769, 777, 778
Mt. Greylock, II, 602 (ill.), 671, 771, 903, 919
Mt. Hermon, II, 674, 953
Mt. Hermon School, II, 674, 953
Mt. Holyoke, I, 177 (ill.); II, 498, 522
Mt. Holyoke College, II, 947
Mt. Tom, II, 576, 595, 597, 598, 599, 600, 629, 634, 637, 676
Muddy River, I, 119
Mumaw, Barton, II, 759, 760, 765, 766, 768, 769
Munden, Abraham, I, 207
Munn, Benjamin, I, 216
Murphy, James Edward, III, 66-67
Myers, Frederick Merchant, III, 26-27
Mystic, I, 356
Mystic River, I, 22, 161

Nagelmackers, Georges, II, 701
Naismith, Dr. James A., II, 844
Narragansett Bay, I, 24
Nash, Thomas, II, 904, 905
Neponset River, I, 95, 164, 165; II, 532
Nesbit, Clayton William, M.D., IV, 269-270
Nevin, Sherrie D., II, 649
New Amsterdam (New York City), I, 96; II, 820
New Ashford, I, 345; II, 653, 678
New Bedford, I, 456
New Boston, II, 679
New Braintree, II, 486
New Britain, Connecticut, II, 619
New England, A New and Further Narrative of, I, 14
New England, The Present State of, I, 14
New England, The War in, I, 14
New England Canaan, I, 33
New England Forestry Foundation, II, 941
New Hartford, Connecticut, II, 494

New Haven, Connecticut, II, 512, 524, 534, 545, 627, 865
New Lebanon, New York, II, 468, 469, 470, 471, 496, 497, 530
New London, Connecticut, I, 148, 154, 161, 327; II, 458, 831
New Marlborough, I, 325, 365; II, 653, 678
New Salem, II, 659, 678
New York City (New Amsterdam), I, 297, 317, 323, 332, 335, 363, 366, 451, 456; II, 460, 467, 468, 509-958, *passim*
Newburyport, I, 306; II, 567
Newell, Harriet, II, 487
—— Nelson C., I, 224
—— Samuel R., I, 224
Newport, Rhode Island, I, 51, 103, 106, 357; II, 751
Newspapers, II, 959-961
Newton, Aaron Wayne, M.D., III, 164-165
—— Rev. Roger, II, 644
Newton, II, 516
Newton Corner, II, 628
Noble, Matthew, II, 905
Nobletown, I, 328, 329
Norbury, II, 467
Norman, Mr. and Mrs. Edward, II, 807
North Adams, I, 438; II, 547, 560, 566, 578, 581, 597, 610, 632, 635, 643, 678, 844, 902, 913, 914, 919-922, 949, 959
North Becket, II, 492, 494
North Blandford, II, 672
North Brookfield, II, 901
North Egremont, I, 319
North Elba, New York, I, 410, 418, 421
North Hatfield, II, 593
North Orange, II, 678
North Sunderland, II, 681
North Wilbraham, II, 472, 473, 475, 476, 792
Northampton, I, 10, 11, 18, 39-41, 172, 175, 233, 236, 244, 251, 252, 317, 335, 343, 346, 411, 426, 430, 440-444, 446, 450; II, 468, 485, 488, 492, 498, 504-506, 511, 512, 523, 524, 534, 544-548, 560, 572, 573, 591-593, 615, 616, 629, 632, 634, 637, 638, 663, 678, 694, 725-731, 733-738, 742-745, 747, 748, 756, 782, 791, 799, 800-802, 814-818, 842, 899, 900, 903, 905, 911, 914, 948, 949, 951, 953, 959
Northampton Cemetery, II, 799-802
Northampton School for Girls, II, 953
Northboro, I, 346, 356; II, 490
Northfield, I, 11, 39, 263, 264, 345, 428; II, 497, 654, 659, 678, 724, 908, 953
Northfield Center School, II, 724 (ill.)
Northfield Farms, II, 678
Northfield High School, II, 908 (ill.)
Northfield School for Girls, II, 953
—— Russell Sage Chapel, II, 952 (ill.)
Norton, John, I, 192
—— W. W., II, 853
Norwich, Connecticut, I, 22, 148, 335; II, 664, 814, 817
Norwich, Huntington, Massachusetts, II, 830
Nowa Anglia, II, 959

Oakham, II, 486
Ober, Emil, III, 156-157
O'Brien, Philip, III, 201-202
Occum, Rev. Samson, II, 817
Old Colony Envelope Co., II, 936-937
Old Order Changeth, The, I, 232-243
Olds, R. E., II, 841
Olmstead, Charles D., II, 547, 551
—— John, II, 578, 598
Oltsch, Harry A., II, 648
Omnibuses and the Herdics, II, 538-544
Onota Lake, I, 172 (ill.)
Orange, II, 603, 617, 630, 639, 659, 678, 913
Orne, Samuel, II, 797
Osborn, Chester, I, 281
Osgood, Rev. Samuel, I, 271; II, 795
Otis, J. L., II, 736
Otis, I, 307; II, 494, 604, 605, 606, 608, 609, 610, 653, 678, 784, 785, 940
Overland Journey, 1645, I, 154-165
Overlees, Frank, II, 760, 765
Owen, Charles Keeley, M.D., III, 116
Oxford, II, 579

Paddock, Adino, I, 362
—— Franklin K., M.D., III, 177-178
Page, Ruth, II, 764
Paige, Charles S., II, 714
—— Frank, II, 692, 714
—— Laura Ann (Tubbs), II, 695, 696
—— William Henry, II, 689, 690, 692, 693, 695-699, 702, 714
Palmer, C. J., I, 345
—— Joseph, I, 334, 335, 337
Palmer, I, 158, 312, 320, 323, 327, 346, 354, 359; II, 466, 472, 473, 474, 475, 476, 521, 543, 579, 590, 597, 611, 614, 622, 624, 629, 639, 640, 641, 660, 678, 901
Palmer Register, II, 648
Panic of 1837, Springfield Citizens in, II, 827
Park, Dr. William E., II, 953
Parker, Captain John, II, 475
—— Hon. Robert Chapin, III, 25
Parkman, Elias, I, 161
Parlett, E. J., II, 845
Parsonage of the Church, Springfield, 1639, I, 184 (ill.)
Parsons, Benjamin, I, 221, 279
—— Charles H., II, 648
—— Ebenezer, I, 221
—— Hugh, I, 196, 209, 218, 241, 242, 244, 264
—— I. S., II, 736
—— Joseph, I, 152, 167, 207, 209, 212, 219, 244, 255, 256, 257, 279, 292, 293; II, 790, 904, 905
—— Mary, I, 197
—— Zenas, II, 880, 881
Partridge, Colonel Samuel, II, 461
Paterson, New Jersey, II, 734
Payne, George S., II, 534
—— Henry C., I, 446
Pearson, Henry, II, 705, 706, 709, 710
Pease, Austin H., II, 706, 710
—— H. L., II, 539
—— L. E., II, 852
Peattie, Donald Culross, I, 150
Peck, Thomas D., II, 577
Peekskill, New York, I, 441
Peirce, Joseph, I, 363
Pekala, Stanley John, M.D., III, 183
Pelham, Henry, I, 330

Pelham, Peter, I, 330
Pelham, I, 445; II, 486, 658, 679, 843 (ill.)
Pellissier, Louis D., II, 575, 756
Pelton, Thurlow Hemsworth, M.D., III, 91
Penn, William, I, 81, 108
Pepper, Francis, I, 207, 233
Pepys, Samuel, I, 58, 227
Perkins, Henry J., II, 595
—— Levi, II, 575
—— James, I, 386
—— Colonel Simon, I, 406, 407, 411
—— Thomas H., II, 789
Perry, Mrs. Ernestine, II, 755
Persons, Frederick A., II, 616, 649
Peru, II, 653, 679, 906, 940
Peter, Hugh, I, 225, 227
Peterborough, New Hampshire, II, 759
Petersburg, New York, II, 483
Phelps, Henry W., II, 858
—— Oliver, II, 879
—— Willis, II, 549, 858
Philadelphia, Penn., I, 324, 330, 335
Philbrook, Katherine, II, 776
Philip, King (see King Philip)
Phillips, Alonzo Dwight, II, 722, 723
—— Wendell, I, 418, 421, 434; II, 815
—— William, II, 878
Phillipston, II, 472
Physicians and Surgeons, I, 53, 59, 203, 245, 270, 306, 335, 363, 423-433; II, 830, 832, 833, 880, 946; III, 39, 44, 46, 49, 53, 54, 56, 61, 65, 68, 70, 74, 78, 80, 84, 88, 91, 96, 101, 103, 108, 111, 114, 116, 122, 124, 129, 136, 139, 143, 148, 156, 160, 162, 164, 167, 170, 174, 177, 180, 181, 187, 190, 196, 203, 204, 208, 210, 214, 216, 219, 223, 225, 228, 230; IV, 236, 239, 240, 247, 249, 251, 259, 263, 265, 269, 272, 274, 281, 284, 294, 320, 353, 360, 370, 378-418, *passim*
Pierce, Franklin, I, 442
—— Harry L., II, 573
Pierpont, Sarah, I, 441
Pillsbury, Joshua, I, 322
Pine Cobble School, II, 953
Pioneer Valley Association, II, 752, 754-757, 843
Pitt, William, I, 310, 313
Pittsfield, I, 157, 172, 259 (ill.), 317, 335, 345, 376, 377, 438, 450, 452, 453; II, 469-471, 485, 486, 490, 492, 493, 495, 517, 525, 528, 529, 560, 566, 573, 578, 581, 582, 595, 602, 606, 608, 613, 621, 624, 627, 629, 630, 632, 640, 653, 679, 684, 787, 868, 897, 901, 902, 904 (ill.), 906, 911-914, 929-935, 940, 944, 946, 953, 960, 961, 965
Pittsfield High School, II, 904 (ill.)
Pittsfield Library, II, 940 (ill.)
Pixley, Stephen, I, 436
Plainfield, I, 434, 435, 436; II, 664, 679
Planter's Plea, I, 16
Platt, Geoffrey, II, 813
—— William, II, 813
Plough, Mrs. Frances, II, 824
—— Harold H., II, 824
Plymouth, I, 24, 75, 77, 79, 84, 86, 92, 96, 97, 99, 100, 122; II, 799, 857, 894
Plymouth Harbor, I, 4 (ill.)
Poe, Edgar Allan, II, 963
Polk, James, I, 442
Pomeroy, H. N., II, 887
—— Jonathan, II, 849, 850
—— L., II, 492
—— Gen. Seth, I, 440, 441; II, 800
Pontoosuc, II, 485
Pontoosuc Lake, I, 168 (ill.); II, 557, 577, 597, 640
Pontoosuc Turnpike, II, 492, 493
Pope, Col. Albert A., II, 935
Poquonock, Connecticut, II, 782
Porter, Elisha, I, 346
Portsmouth, New Hampshire, I, 323, 370, 371, 372, 373; II, 606
Potatoes, I, 107-117
Potter, Adrian, II, 755
Powell, Jeremiah, I, 343, 372, 393
—— Rev. Lyman, I, 442
—— William, I, 443
Powers, John, II, 546
Pownal, Vermont, I, 345, 483
Prescott, Major Benjamin, II, 505
—— Charles B., II, 555
Prescott, II, 665
Press, Harry A., M.D., III, 180-181
Pritchard, Roger, I, 207, 209
Prouty, Fletcher, II, 750
Providence, Rhode Island, I, 154, 163, 164, 371, 456; II, 619, 704, 729
Pryngrydays, Edmund, I, 266
Pulaski, Kazimierz, I, 324
Pullman, George, II, 702
Putnam, F. W., I, 282
—— Roger L., II, 755, 757
—— Rufus, II, 477
Pynchon, Amy Willys (Wyllys), I, 205, 299
—— Dr. Charles, I, 430, 431, 432, 433; II, 880
—— Edward, I, 303, 304
—— Frances Sanford, I, 227
—— John, I, 36-96, 128-139, 175-309, 426, 428; II, 459-784, 823, *passim*
—— John, Jr., I, 231, 238, 264, 270, 299
—— Dr. Joseph (I), I, 231, 239, 241, 270
—— Dr. Joseph (II), I, 429
—— Dr. Joseph C., I, 245, 429; II, 830
—— Margaret, I, 205, 238
—— Mary, I, 197, 231, 250, 428
—— Mehitabel, I, 231
—— Dr. Thomas R., I, 201
—— Walter, I, 297, 323, 380; II, 787
—— William, I, 3-231, 244-278, 306, 423; II, 475, 779-882, *passim*
—— William, Home of, I, 244-250

Quabaug (Brookfield), II, 458, 459, 474, 475
Quabaug River, I, 158
Quebec, Canada, I, 329, 362, 363; II, 497, 627
Queen Anne, I, 300
Quincy, Mrs. Josiah, II, 478
—— Sophia, II, 478
Quincy, I, 95; II, 829, 871, 921

Railroads, II, 516-537
Railways, List of Horse, Cable and Electric (arranged alphabetically), II, 630-644
Raleigh, Sir Walter, I, 76, 122
Rand, Addison, II, 571
Randall, Mary, I, 299

Raspberry Brook, Longmeadow, I, 213
Rawle, E. P., II, 706, 712
—— James, II, 705, 712
Ray, George, II, 723
Rea, Dr. Caleb, I, 311
Read, Dorothy, II, 750
Reader, John, I, 139
Recreation in Western Massachusetts, II, 954-959
Reed, David Allen, II, 852
—— Sumner, II, 477
—— Thomas, I, 358
Reeves, Thomas, I, 207, 289
Reid, Colonel Jonathan, I, 322
Reilly, Martin C., II, 897
—— "Tim", II, 559, 567, 576, 577, 580
Reiter, Dr. Frank H., II, 951
Relation, Mourt's, II, 819
Rensselaer Polytechnic Institute, II, 947
Revere, Paul, I, 334, 335
Revolutionary War, I, 330-361, 362-396
Reynolds, Harris A., II, 941
Rice, Allen Galpin, M.D., IV, 236-237
—— C. F., II, 709
—— Charles W., II, 853
—— Henry B., I, 217
—— Kenneth H., M.D., IV, 281
—— William, II, 795
Rich, Gilbert C., II, 648
Richards, Edward, II, 706
—— William, I, 435, 436
Richardson, Thaddeus, II, 862
Richey, Prof. Albert F., II, 601
—— Ephraim, II, 599
Richmond, C. Q., II, 581, 607, 610
—— Jacob, IV, 260-261
Richmond, II, 471, 494, 528, 631 (ill.), 653, 679, 944
Richmond Furnace, II, 679
Richmond Summit, II, 679
Riley, John, II, 784
—— Margaret O'Dea, II, 784
Ringville, II, 682
Ripley, D. H., II, 668
—— Col. James W., II, 877, 899
Rising Paper Company, II, 920 (ill.)
Riverdale, II, 590
Riverside, II, 674
Roads and Road-Making in Colonial Connecticut, I, 6
Robinson, John I., III, 188
—— Josiah Quincy, II, 483, 484
—— William, II, 704
Rochester, New York, II, 628
Rockville, Connecticut, II, 742
Rogers, Robert, I, 314
Rood, David, I, 436
Roosevelt, Theodore, I, 446; II, 621
Root, Herbert C., II, 590
Rosenthal, Arthur O., M.D., III, 68-69
Rositzky, Barbara, II, 750
Rosston, Cyril Parks, M.D., IV, 272
Rowe, I, 301; II, 659, 679, 906
Roxbury, I, 118, 119, 124, 129, 144, 146, 152, 177, 193, 194; II, 782, 783, 863
Roxbury, At Home in, I, 118-125
Roxbury Church, I, 118
Royalston, I, 358
Rubendall, Dr. Howard L., II, 953
Ruberto, Anthony, Jr., III, 203
Rude, Margaret, II, 954
Russell, Rev. John, I, 176, 254, 267, 274; II, 809
Russell, II, 524, 597, 661, 679, 684, 792, 941
Rutland, I, 357, 358; II, 486, 491
Ryan, Charles Vincent, III, 67-68
—— Edward Joseph, III, 113-114

Saarinen, Eliel, II, 775
Saco, Maine, I, 43, 101
Safford, Charles Louis, II, 776
Salem, I, 6, 70, 91, 196; II, 819, 963
Salisbury, Connecticut, I, 104, 296, 312, 359
Saltonstall, Leverett, II, 574
—— Philip, II, 574
—— Sir Richard, I, 193, 268
Sanborn, Simon, I, 388; II, 797
Sanderson, Harvey, I, 338
—— Herbert, II, 705
—— William E., II, 695
Sandisfield, I, 307, 325, 350; II, 465, 494, 495, 654, 679, 906, 940
Sands, Reuben, II, 848
—— Samantha, II, 848, 853
Saratoga, New York, I, 324, 342, 344, 347, 354; II, 486, 564, 787
Sargeant, Mr. and Mrs. Jacob, II, 879, 881
—— Thomas, II, 880
Saugus, I, 289, 291
Savoy, I, 436; II, 654, 679
Sawyer, Raymond M., II, 648
Saybrook, Connecticut, I, 82, 102-178, *passim*; II, 457, 515, 822
Schiller, Louis, M.D., III, 181
Schmoyer, Sheron A. A., M.D., III, 187-188
Schodack, New York, II, 464, 490, 491, 531
Schoolhouse, Old Red, Prescott, II, 665 (ill.)
Schools and Academies:
Altaraz School, II, 950
Barrington School, II, 950
Bement School, II, 951
Berkshire School, II, 951
Berkshire School for Crippled Children, II, 951
(Mary A.) Burnham School, II, 953
Clarke School for the Deaf, II, 951
Cranwell Preparatory School, II, 951
Cummington School, II, 951
Deerfield Academy, II, 951 (ill.), 952
Eaglebrook School, II, 952
Foxhollow School for Girls, II, 952
(Miss) Hall's School, II, 953
Hill Institute, II, 952
Lenox School, II, 952
Northampton School for Girls, II, 953
Northfield School for Girls, II, 952 (ill.), 953
Pine Cobble School, II, 953
Stoneleigh-Prospect Hill School, II, 953
Western Massachusetts School of Pharmacy, II, 954
Williston Academy, II, 954
Windsor Mountain School, II, 954
Workshop School for Children, II, 954

Schuyler, General Philip, I, 347, 371; II, 472
Scott, John A., II, 648
—— Luke, I, 311
Seal of Proprietors of Locks & Canals, Hampshire County, Mass., II, 508 (ill.)
Sedgwick, Catherine, II, 963
—— Theodore, II, 771
Seelye, Prof. Laurence, I, 443
—— Rev. L. Clark, I, 445
—— Julius, I, 445
Sequestration, Committee of, II, 788
Sericulture in Western Massachusetts, II, 725-749
Sessions, Roger, I, 443
Setting the Stage, I, 74-85
Sever, William, I, 376
Sewall, Judge Samuel, II, 458, 459, 460
Shaker Village, II, 528
Shallop, 17th Century, I, 76 (ill.)
Sharon, Connecticut, I, 359, 360
Shatterack Mountain, II, 524
Shattuck, Calvin, II, 727, 728
Shattuckville, II, 597
Shaw, Donald E., II, 538, 683, 717, 725
—— E. P., II, 578
—— Judge Henry, II, 897
—— Henry Wheeler (Josh Billings), I, 438; II, 897
—— Irving Roland, III, 228
—— Joshua, I, 354
Shawn, Ted, II, 757, 759 (port.), 771, 965
Shays, Daniel, I, 396, 445, 468; II, 907
Shea, Walter M., IV, 386-387
Shearer, Joseph, II, 492
Sheffield, I, 98, 309-311, 324; II, 464, 470, 654, 679, 824, 905, 907, 942, 951, 961
Shelburne, I, 345; II, 659, 679, 680
Shelburne Falls, I, 446; II, 619, 679
Sheldon, George, II, 812
—— Hon. H. S., I, 201
—— J. M. A., II, 812
Sheppard, Tom, II, 626
Sherman, Dr. John, I, 429
Sherwin, William F., I, 446
Sherwood, Robert E., II, 771, 964
Shoemaker, Elisabeth, II, 754, 757
Shrewsbury, I, 346, 356; II, 467
Shumway, R. G., II, 668
Shurtleff, Col. Roswell, II, 829
Shutesbury, I, 445; II, 659, 680
Sibley, Hiram, I, 438
Sikes, Increase, I, 213
—— Nathaniel, I, 279
—— Richard, I, 207, 220, 276, 279
Silliman, Prof. Benjamin, II, 494
Silk Industry of Northampton, II, 725-750
Silver Lake, Pittsfield, II, 930
Simison, Robert T., II, 591
Simpson, A. Kenneth, II, 945
Simsbury, Connecticut, I, 312, 382; II, 784
Sisson, Milton Melvin, M.D., III, 190-191
Sitting Bull, I, 27
Sixteen Acres, Springfield, I, 232-243
Skilton, Charles, I, 443
Skinner, Joseph A., II, 637
—— William, II, 737
Skipmuck, I, 301, 302
Slowick, Frank A., M.D., IV, 392
Smallpox, I, 17, 18
Smith, Alfred, II, 512, 514, 515
—— Ann, II, 882
—— Anna, I, 231
—— David, II, 669, 829
—— Dr. David Paige, II, 797
—— Edward, II, 599
—— Edwin W., II, 755, 757
—— Mrs. Eunice Brewer, II, 797
—— G. H., II, 555
—— Gerritt, I, 410, 418
—— Gertrude Robinson, II, 771, 776
—— Henry, I, 132, 133, 138, 139, 144, 152, 166, 185, 191, 193, 194, 200, 207, 226, 227, 229, 231, 237, 238, 268
—— Mrs. Henry Wilds, II, 764
—— Hinsdale, II, 858
—— Hiram, II, 555
—— J. E., II, 550, 551
—— Capt. John, I, 6, 10, 68, 75, 77, 80, 83, 84, 86, 87, 90, 125, 128, 276; II, 820, 822
—— Oliver, I, 445
—— Simon, I, 281
—— Sophia, I, 445
—— Lt. Col. Thomas J., I, 394; II, 788
—— Col. William, I, 296, 297, 365, 382, 386, 387, 388, 393; II, 787
—— William Loughton, I, 327, 396; II, 467
Smith College, II, 948 (ill.), 949
Snow, Jessie, I, 437
—— Norman Leon, III, 15
Snyder, Prof. Grant B., II, 756
Society of Friends Meeting House, Adams, II, 817 (ill.)
Somers, Connecticut, II, 574
South Amherst, II, 634
South Deerfield, II, 534, 593, 625, 633, 804, 805, 807
South Framington, II, 839
South Hadley, I, 261, 397; II, 500, 501, 502, 504, 505, 508, 511, 634, 637, 665, 676, 680, 789, 791, 828, 947
South Hadley Falls, II, 550, 555, 556, 560, 575, 792
South Lee, II, 608, 832
South Manchester, Connecticut, II, 727
South Union, Maine, II, 821
South Williamstown, II, 638 (ill.)
Southampton, I, 439; II, 665, 680
Southbridge, I, 158; II, 474, 475, 520, 543, 579, 611
Southwestern Musician, The, II, 771
Southwick, II, 661, 680
Southworth, John, II, 792
—— Wells, II, 792
Spalding, Albert, II, 771
—— Mary Pyle, II, 775
Spencer, I, 312, 346, 354, 359; II, 466, 476, 520, 579
Spicer, E. F., II, 852
Spooner, Ralph Stevens, IV, 377-378
Sprague, Frank L., II, 565, 566
Springfield, I, 2-96; 103-239, 244-360, 365-456; II, 457-476, 492-594, 602-666, 680-863, 873-959, *passim*
Springfield Car & Engine Company, II, 716

Springfield College, II, 950
Springfield Locomotive Works (Bemis & Company), II, 716
Springfield News, II, 648, 959
Springfield Republican, II, 648, 852, 886, 959
Springfield Union, II, 648, 959
Springfield, Indian Fort at, I, 272-285
Springfield Meeting House, I, 183-190
Squantum, I, 95
Stafford, Connecticut, I, 339
Stanley, William, II, 771, 918
Starkey, Henry, II, 795
Starkweather, Mrs. Charles, II, 726
Starr, Joseph, I, 311
State Teachers College, North Adams, II, 959
State Teachers College, Westfield, II, 949
Steamboats, II, 509-516
Stearns, Charles, I, 180; II, 854
—— George M., II, 892
—— Henry, II, 492
Stearnsville, II, 528
Stebbins, Dr. Daniel, II, 727
—— Ebenezer, I, 365, 387
—— Fannie, II, 749
—— George M., II, 567
—— Rowland, I, 208, 209; II, 800
—— Thomas, I, 203, 207, 208, 233, 238, 241, 287, 303, 365, 376, 385
—— Zebina, II, 878, 879, 880, 881
Steen, Sam, II, 766
Stephenson, George, II, 532, 869
—— John, II, 550, 683, 700
Sterner, Albert, II, 771
Stetson, George W., II, 572
Stevens, Walter Leroy, III, 99-100
Stewart, Goodman, I, 266
—— John, I, 263, 268, 287, 288, 289, 290, 296
Stiles, John, I, 289
Stillton, Richard, II, 800
Stillwater, New York, II, 482, 483
St. Jerome's Guards, II, 840 (illus.)
St. Lawrence River, I, 8, 46; II, 820
St. Leger, Col. Barry, I, 342
St. Paul's Church, Stockbridge, II, 895 (ill.)
St. Paul's Episcopal Church, Holyoke, II, 960 (ill.)
Stockbridge, Levi, I, 444
Stockbridge, I, 104, 297, 314, 447; II, 468, 469, 471, 517, 562, 563, 564, 617, 654, 664, 681, 751, 759, 772, 773, 776, 833, 895, 902, 905, 906, 911, 914, 916, 918, 962, 963
Stockbridge Grange, II, 944
Stockbridge Library, II, 911 (ill.), 944
Stockbridge Parent Teacher Association, II, 944
Stoddard, Charles N., IV, 261
—— Charles N., Jr., IV, 262
—— Hester Mather, II, 800
—— Solomon, II, 800
Stoddard, Ball & Bartlett, Greenfield, IV, 261-262
Stone, Amasa, II, 716
—— Judge Harlan F., I, 445
Stoneham, II, 862
Stoneleigh-Prospect Hill School, II, 953
Stonington, Connecticut, I, 164
Stony River, I, 119
Storm, The Coming, I, 330-333
Storm Breaks, The, I, 335-341
Storrs, Mrs. N., II, 800
—— Joseph W., I, 281
Stow, II, 478
Stowe, Harriet Beecher, II, 771, 816
—— Lyman Beecher, II, 771
—— William, I, 398
Streeter, Samuel U., II, 755
Strickland, F. Cowles, II, 760
Strong, Caleb, I, 440, 443; II, 800, 802
—— John, II, 799, 800
—— Mrs. Murray, II, 814, 816
Sturbridge, I, 148, 158; II, 458, 475, 578, 640
Sudbury, I, 312, 356, 359; II, 467
Suffield, Connecticut, I, 133, 300, 312, 327, 360, 382, 430; II, 460, 461, 462, 463, 468, 574, 641, 785, 791, 849, 879
Suffolk, Virginia, I, 403
Sugar Loaf Mountain, II, 498
Sullivan, J. A., II, 548, 555
—— Patrick J., M.D., III, 136-137
Sunderland, II, 625, 630, 659, 681
Suprenant, Norris Mitchell, III, 24-25
Surgeon's Mate, or Military and Domestic Medicine, I, 53
Sutton, I, 346; II, 865
Swain, George F., II, 587
Swanzey, I, 263
Swift, Charles W., II, 796
—— Earle D., II, 731, 737
—— Margaret Howard, II, 796
—— Walter Ambrose, III, 60-61
Syphilis, I, 75

Taconic Mountains, Vermont, II, 902, 903
Tadoussac, Quebec, I, 70, 71
Taft, Susan A., II, 884
Taggart, John A., II, 573
Talcott, Norman W., II, 689, 717
Talcott Axle Works, N. W., II, 717
Tallmadge, S. J., II, 539
Tanglewood, II, 771-778, 965
Tanglewood Shed, Lenox, II, 774 (ill.)
Tapley, George W., II, 724
Tatham, West Springfield, II, 577
Taunton, I, 263, 456
Taylor, Rev. Edward, I, 269, 291, 299; II, 458
—— G. Wood, II, 845
—— Varnum, II, 724
Telephone, I, 448-456
Temple, John Burrington, M.D., III, 84-85
—— Josiah Howard, II, 477
Tennyson, Alfred, Lord, II, 861
Terrell, Annabella, II, 764
Tewksbury, I, 323
Thames River, I, 154
Thayer, Nathaniel, II, 885
Thibault, Conrad, I, 443
Thomas, Rowland, I, 212, 213, 233, 234, 238, 242; II, 598, 629
—— Thomas, I, 408
Thompson, John Reginald, M.D., IV, 247
—— Slason, II, 587
—— Thomas, I, 207, 241
Thompsonville, Connecticut, II, 574, 619

Thomson, Elihu, II, 565, 566
Thorndike, I, 678
Thornton, Col. William, II, 867
Three Rivers, II, 678
Ticonderoga, New York, I, 307, 311, 315, 317, 318, 320, 324, 329, 362, 363, 366, 371; II, 787
Tinkham, David, I, 234
Tisdale, Samuel Trescott, IV, 264
Tobin, Clarke W., II, 748
Tobacco, I, 107-117
Tobacco Barn, Hadley, I, 108 (ill.)
Tolland, I, 324, 325; II, 494, 661, 681, 691, 940
Toppin, William H., I, 224
Torrey, Charles Turner, I, 413
Torrington, Connecticut, I, 406, 422
Tourist, An Early, II, 877-882
Towle, Anthony, II, 928
Towne, Arthur H., II, 649
Transportation, II, 457-537, 538-649
Trask, Eliphalet, II, 666
Trevethick, Richard, II, 869
Troy, New York, II, 532, 578, 687, 912-914, 919, 947
Trudel, Paul A., IV, 262
Trumbull, James R., I, 443
—— Governor Jonathan, I, 358, 372, 380, 391
Truxton, New York, II, 859
Tucker, William, I, 358
Tudor, Frederick, I, 1
Tuesday Club, II, 944
Tufts, Alice B., I, 331
Tully, II, 678
Turners Falls, I, 270, 275, 432; II, 603, 615, 616, 624, 625, 632, 633, 636, 681
Turnpike, Pontoosuc, II, 492
—— Second Massachusetts, II, 477-485
—— Tenth Massachusetts, II, 494-500
—— Third Massachusetts, II, 485-492
Tuttle Mountain, II, 524
Twiss, Rev. J. J., II, 831
Tyler, P. B., II, 666
Tyringham, I, 349; II, 655, 681, 906

Ufford, Thomas, I, 132, 138, 139
Uncas, I, 27
Underhill, Captain John, II, 818, 822
Unitarian Church, Springfield, II, 828 (ill.)
University of Massachusetts, II, 949
Usher, Hezekiah, I, 291

Valentine, Edward, II, 729, 735
Vallentin, Antonina, II, 874
Valley Forge, Pennsylvania, I, 324, 365, 382
van Beethoven, Ludwig, II, 776
Van Buren, Martin, II, 531
Van De Poele, Charles Joseph, II, 562, 565, 566
Van der Donck, Adriaen, I, 8, 13, 23, 44, 84, 96
van Geyseling, Peter, II, 848
Van Horn, Born, I, 250
—— Dr. John, I, 431
Van Meter, Dr. Ralph A., II, 949
Van Rensselaer, Stephen, II, 947
van Simons, Willard, II, 761
Vane, Sir Harry, I, 193, 225, 227, 228
Vans, Hugh, I, 304
Vassos, George Arthur, Jr., M.D., III, 56
Vaughan, Augustus, II, 821
Vernon, Rhea J., II, 820
Verrazzano, Giovanni da, I, 6, 24, 31, 33, 48, 70, 83; II, 820, 822
Vincent, Philip, I, 97
Vohr, Fred H., M.D., III, 139-140
von Riedesel, Baron Frederick, I, 342, 349, 351, 352, 353, 354, 357, 359, 360, 361

Wadsworth, Daniel, II, 494
—— S., II, 865
Wagner, Webster, II, 696, 697, 702
Waite, Richard, I, 266
Wales, II, 661, 681
Wallace, A. B., III, II, 757
—— Dudley Brabner, IV, 253-254
—— George V., Jr., II, 756, 757
Walpole, Massachusetts, I, 165
Walpole, New Hampshire, II, 793
Walsh, Ralph P., IV, 367
Waltham, I, 339, 346; II, 467, 478
Wapping School, Deerfield, II, 808 (ill.)
Ward, Samuel, I, 442
Ware, II, 579, 591, 610, 634, 639, 642, 665, 681
Warner, Charles Dudley, I, 436
—— James, I, 213; II, 667
—— John, I, 288
—— Lewis, II, 846
—— Samuel, I, 281
—— Thomas, II, 868, 869
—— Worcester R., I, 436, 437
Warren, Bentley W., II, 776
—— D. D., II, 697
—— Dr. Joseph, I, 335, 363
Warren, I, 113, 346, 354, 472, 473, 475; II, 476, 477, 520, 521
Warriner, James, I, 216
—— William, I, 207, 217
Warwick, II, 659, 681
Washburn, E. G., II, 695
Washington, George, I, 235, 307, 318, 329, 353, 361, 362, 363, 364, 366, 367, 368, 370, 372, 373, 377, 378, 381, 389, 391, 392, 395; II, 457, 467, 476, 786, 787, 813, 848, 862, 906
—— Madison, I, 408
Washington, Massachusetts, II, 470, 492, 493, 527, 655, 681, 684
Wason, Charles, II, 683, 684, 686, 716
—— Thomas W., II, 666, 667, 683, 684, 686, 687, 688, 689, 690, 691, 692, 695, 702, 703, 704, 708, 716
Wason Car Works of Springfield, II, 683-715
Wason Manufacturing Company, Officers in 1873, II, 693
Waterford, New York, II, 691
Watertown, I, 124, 312, 323, 336, 356, 360, 374; II, 478
Watkinson, David, II, 882
—— Samuel, II, 878
—— Samuel, Jr., II, 878, 879, 880, 881
—— William, II, 882
Watson, Prof. F. R., II, 775

Watt, James, II, 865
Wayland, I, 154
Wayside, II, 611
Weatherby, C. A., II, 942
Weatherhead, Joseph, II, 868
Webster, Daniel, II, 816
—— Noah, I, 442, 445; II, 671
Webster, II, 474, 475
Wells, F. E., II, 719, 927
—— F. O., II, 719, 720
—— George, II, 887
—— Gideon, II, 549, 552
Wendell, II, 659, 681
Wesson, Daniel B., II, 576
West Barnstable, I, 306
West Becket, II, 609
West Bridgewater, II, 791, 865
West Brimfield, II, 672
West Brookfield, II, 475, 477, 520, 579, 580, 634, 642, 901
West Lynn, II, 566
West Otis, I, 349, 350
West Pelham, II, 595
West Pittsfield, II, 582, 639
West Point, New York, I, 324
West Springfield, I, 40, 270, 302-465, *passim*; II, 499, 523, 542-780, *passim*, 782-790, 832, 844, 878
West Stockbridge, I, 518, 528, 529, 530, 651, 655, 682
Westboro, II, 516
Westerly, Rhode Island, I, 162
Western (now Warren), II, 472, 473
Western Massachusetts School of Pharmacy, II, 954
Westfield, I, 18, 23, 40, 236, 252, 266, 269, 274, 291-453, *passim;* II, 458, 465, 468, 469, 492, 493, 524, 560, 570, 571, 572, 573, 576, 577, 578, 597, 606-949, *passim*
Westfield River, I, 103; II, 525, 526, 527, 684
Westfield Times and News Letter, II, 648
Westhampton, I, 436, 440; II, 488, 666, 682
Westinghouse, George, II, 771
Weston, Byron, I, 437; II, 792
Weston, I, 323, 346; II, 462
Wethersfield, Connecticut, I, 39, 41, 82, 124, 129, 130, 132, 133, 134, 145, 178, 193, 223, 253, 254, 262
Whalen, Kearons James, M.D., III, 174
Whateley, II, 659, 682
Wheat, William, II, 696
Wheaton, Walter, II, 581
Wheeler, Daniel M., II, 649
—— Norman F., II, 852
—— Robert K., II, 942
Wheelmeadow Brook, Longmeadow, I, 213
Wheelock, Eleazer, II, 817
Whipple, George E., II, 571
Whistler, Major George W., II, 518, 533, 534
—— James A. McNeill, II, 518, 534
Whitaker, Edmund, II, 791
—— Rev. Nathaniel, II, 817
—— Sarah B., II, 953
White, Horace, II, 786, 863
—— N. Curtis, II, 547
—— R. H., I, 437
White, Sewall, I, 351
—— Stewart Edward, II, 781
Whiting, Joseph, I, 233, 250, 428
—— Margaret C., II, 810
—— William, II, 792
Whiting Guards, II, 835 (ill.)
Whiting Paper Company, II, 792
Whitman, Marcus, I, 435
Whitmarsh, Samuel, II, 725, 727, 728, 729, 735, 746
Whitney, Dr. Elijah, II, 559
—— Prof. Josiah Dwight, I, 441
—— William C., I, 446
—— Prof. William Dwight, I, 441, 442
Wickersham, Lucille, II, 648
Wickham, George S., M.D., III, 148
Wiggins, Lewis N., II, 755
Wilbraham, I, 172, 302, 327, 358, 387, 394, 402; II, 466, 522, 640, 662, 682
Wilbraham Mountains, I, 179, 232; II, 521, 783
Wilcox, Mrs. Graham D., II, 563, 648
Wilder, Harris Hawthorne, I, 29, 64
Willard, Charles F., II, 597
Willcox, Roland C., II, 648
William of Orange, I, 299
Williams, Eleazar, I, 222
—— Eleazer, II, 879, 880
—— Ephraim, I, 297, 309, 310, 339, 431, 438
—— Eunice, II, 801
—— Rev. John, II, 809
—— Col. Joseph, I, 315; II, 880, 881
—— L. B., II, 736
—— Parson, II, 806
—— Roger, I, 14, 19, 33, 35, 49, 52, 53, 54, 55, 58, 61, 63, 64, 65, 72, 152, 163, 169, 170, 251, 278; II, 819, 822, 823
—— Solomon, II, 801
—— Rev. Stephen, I, 335, 340, 341; II, 461
—— William, I, 376, 377
Williams College, II, 946, 947, 949
Williamsburg, Massachusetts, I, 440; II, 548, 591, 592, 611, 638, 666, 682
Williamsburg, Virginia, II, 803
Williamstown, I, 310, 343, 438; II, 471, 502, 597, 635, 655, 682, 751, 752, 821, 903, 913, 914, 923, 949, 953
Willimansett, I, 148; II, 594, 672, 954
Willimantic, Connecticut, II, 731
Williston, Godfrey, I, 386
—— John Payson, I, 439
—— Rev. Payson, I, 439
—— Samuel, I, 439; II, 922, 923
Williston Academy, II, 954
Wilmington, I, 323
Wilson, Allen B., I, 438
—— Rev. John, I, 118
—— Mira B., II, 953
—— Woodrow, I, 445
Winch, Stuart, II, 616
Winchell, Nathaniel, I, 386
Winchester, New Hampshire, II, 478
Windsor, Connecticut, I, 39, 41, 79, 82, 100, 122, 123, 124, 129, 132, 133, 134, 139, 148, 151, 152, 153, 158, 159, 160, 161, 193, 206, 212, 216, 223, 245, 265; II, 460, 468, 470, 499, 500, 508, 574, 887

Windsor, Massachusetts, II, 655, 682, 799, 906, 940, 954
Windsor, Vermont, II, 600
Windsor Mountain School, II, 954
Winterholder, Herman, II, 624
Winthrop, Governor John, I, 18, 23, 25, 50, 52, 54, 56, 77, 80, 81, 82, 100, 107, 120, 130, 151, 192, 194, 196, 205, 225, 228, 248, 273, 278, 425; II, 457, 458, 475
—— John, Jr., I, 107, 109, 129, 151, 152, 153, 155-165; II, 474
—— Wait, I, 163
Wither, George, II, 893
Woburn, I, 323
Wolcott, E., II, 883
—— Roger, II, 576
Wolfe, General James, I, 362
Wood, Clark V., II, 579, 580
—— Edmund, I, 132, 139
—— Lemuel, I, 315
—— William, I, 155
Woodbridge, Col. Ruggles, I, 310
Woodbury, Peter, I, 358
Woodcock, John, I, 152, 191; II, 779, 782, 783
Woodhall, John, I, 53
Woodin, William H., II, 712
Woodruff, T. T., II, 701, 702
Woodstock, Connecticut, I, 129, 158; II, 522
Worcester, I, 312, 323, 332, 335, 343, 346, 354, 358, 359, 361, 372; II, 459, 461, 462, 466, 467, 486, 487, 490, 516, 517, 519, 520, 533, 536, 543, 545, 550, 564, 565, 578, 579, 580, 611, 619, 620, 643, 723, 831, 860, 861, 890, 901, 907, 912
Work, Joseph, II, 551
Workshop School for Children, II, 954
World War I, I, 297; II, 720
World War II, I, 297; II, 721, 755, 813, 924, 931
Woronoake Heights, II, 679
Woronoco, II, 679
Worthington, Col. John, I, 306, 330, 331; II, 458, 500
Worthington, I, 345; II, 489, 666, 682, 906
Worthy, Frank, II, 787
—— Justin L., II, 787
—— Valentine, II, 787
Wrenn, George H., II, 893
Wright, Andrew J., II, 853
—— Eleazer, II, 791
—— Frederick C., II, 649
—— George L., II, 792
—— Harry Andrew, I, title page, xv, 149, 423, 426; II, 536, 880, 888
—— Reginald, II, 762, 763, 764
—— Samuel, I, 207, 209

Yale, Caroline, I, 443
Yardell, Harry, II, 687
Yerrall, William Wood, III, 167-168
Yorktown, Virginia, I, 393
Young, Frank R., I, 404
Younglove, Timothy, II, 464

Zoar, II, 672
Zupanec, Ralph, M.D., III, 162-163
Zylonite, II, 566

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